

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐

<b>APPLICATION FOR PERMIT TO DRILL</b>						<b>1. WELL NAME and NUMBER</b> NBU 1022-12A1BS			
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES			
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES			
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.						<b>7. OPERATOR PHONE</b> 720 929-6515			
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217						<b>9. OPERATOR E-MAIL</b> julie.jacobson@anadarko.com			
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UT ST UO 01997-A ST			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>			
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>			
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>			<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>			

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	598 FNL 621 FEL	NENE	12	10.0 S	22.0 E	S
Top of Uppermost Producing Zone	81 FNL 481 FEL	NENE	12	10.0 S	22.0 E	S
At Total Depth	81 FNL 481 FEL	NENE	12	10.0 S	22.0 E	S

<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 81		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1674	
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 606		<b>26. PROPOSED DEPTH</b> MD: 8530 TVD: 8470	
<b>27. ELEVATION - GROUND LEVEL</b> 5171		<b>28. BOND NUMBER</b> 22013542		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 43-8496	

Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2200	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 8530	11.6	I-80 LT&C	12.5	Premium Lite High Strength	270	3.38	11.0
							50/50 Poz	1160	1.31	14.3

**ATTACHMENTS**

**VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

<b>NAME</b> Gina Becker	<b>TITLE</b> Regulatory Analyst II	<b>PHONE</b> 720 929-6086
<b>SIGNATURE</b>	<b>DATE</b> 09/09/2011	<b>EMAIL</b> gina.becker@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047519510000		<b>APPROVAL</b> <div style="text-align: center;">             Permit Manager         </div>

**RECEIVED: November 22, 2011**

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-12A1BS**

Surface:	598 FNL / 621 FEL	NENE
BHL:	81 FNL / 481 FEL	NENE

Section 12 T10S R22E

Uintah County, Utah  
Mineral Lease: UT ST UO 01197-A ST**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1124	
Birds Nest	1401	Water
Mahogany	1754	Water
Wasatch	4141	Gas
Mesaverde	6296	Gas
MVU2	7260	Gas
MVL1	7829	Gas
TVD	8470	
TD	8530	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program*

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8470' TVD, approximately equals  
 5,421 psi (0.64 psi/ft = actual bottomhole gradient)

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Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,546 psi (bottom hole pressure  
 minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

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Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
 (0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

**Background**

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and*

*on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

10. **Other Information:**

*Please refer to the attached Drilling Program.*

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	September 7, 2011		
WELL NAME	<b>NBU 1022-12A1BS</b>					TD	8,470'	TVD	8,530' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5171.4
SURFACE LOCATION	NENE	598 FNL	621 FEL	Sec 12	T 10S	R 22E			
	Latitude:	39.969056	Longitude:	-109.380377		NAD 27			
BTM HOLE LOCATION	NENE	81 FNL	481 FEL	Sec 12	T 10S	R 22E			
	Latitude:	39.970471	Longitude:	-109.379874		NAD 27			
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.								

NBU 1022-12A Pad- Drilling Program Approved- 090611.xls

090611.xls  
**RECEIVED: September 09, 2011**



## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	LTC	BTC
CONDUCTOR	14"	0-40'						
						3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,200	28.00	IJ-55	LTC	2.46	1.83	6.45
						7,780	6,350	279,000
PRODUCTION	4-1/2"	0 to 8,530	11.60	I-80	LTC/BTC	1.11	1.15	3.49

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi)

0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoys.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	1,700'	65/35 Poz + 6% Gel + 10 pps gilsonite	160	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,640'	Premium Lite II +0.25 pps	270	20%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	4,890'	50/50 Poz/G + 10% salt + 2% gel	1,160	35%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers

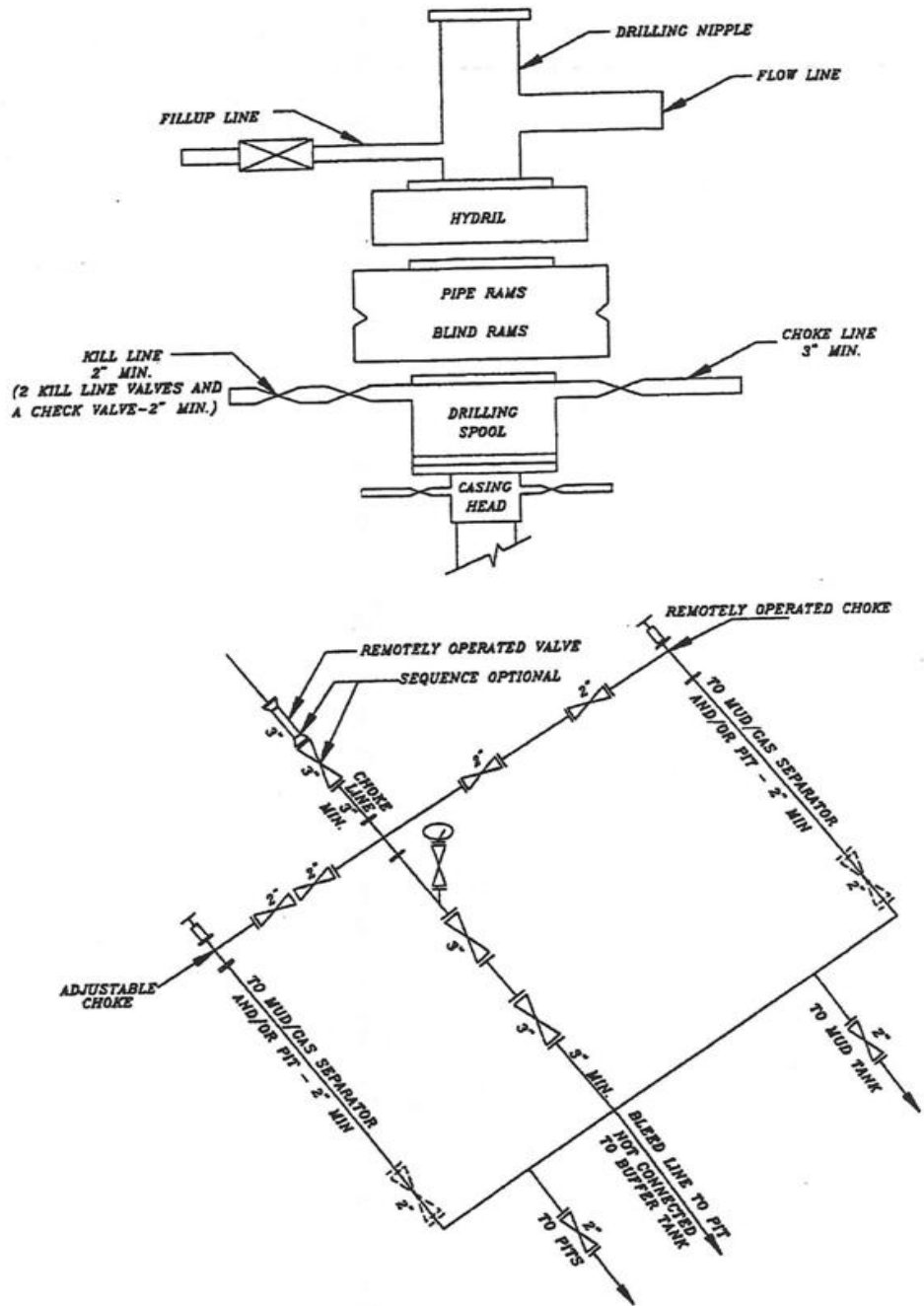
DATE:

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE:

EXHIBIT A  
NBU 1022-12A1BS



**T10S, R22E, S.L.B.&M.**

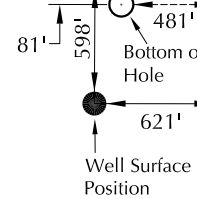
Found 1991 Aluminum  
Cap with Pile of Stones.  
Fence Post on SE side  
of Cap.

S89°59'W - 40.01 (G.L.O.)  
S89°57'13"W - 2640.76' (Meas.)

N89°39'W - 40.01 (G.L.O.)  
N89°41'22"W - 2640.46' (Meas.)

Found 1991  
Aluminum Cap in  
Pile of Stones.

Found 1991 Aluminum  
Cap in Pile of Stones.  
Fence Post on North  
side of Cap.



N0°01'W (G.L.O.)  
N00°25'25"E - 5276.36' (Meas.)

Not  
Monumented

**WELL LOCATION:  
NBU 1022-12A1BS**

ELEV. UNGRADED GROUND = 5171.4'

**12**

Found 1991 Aluminum  
Cap with Pile of  
Stones. Fence Post  
on North side of Cap.

N00°03'41"E (Basis of Bearings)  
2640.93' (Measured)  
N0°07'E - 40.02 (G.L.O.)

NBU 1022-12A1BS (Surface Position)

NAD 83 LATITUDE = 39.969022° (39° 58' 08.478")  
LONGITUDE = 109.381057° (109° 22' 51.805")

NAD 27 LATITUDE = 39.969056° (39° 58' 08.601")  
LONGITUDE = 109.380377° (109° 22' 49.356")

NBU 1022-12A1BS (Bottom Hole)

NAD 83 LATITUDE = 39.970437° (39° 58' 13.573")  
LONGITUDE = 109.380554° (109° 22' 49.995")

NAD 27 LATITUDE = 39.970471° (39° 58' 13.697")  
LONGITUDE = 109.379874° (109° 22' 47.546")

Found Uintah  
County Aluminum  
Cap on 3/4" rebar.  
Pile of Stones

Not  
Monumented

N89°52'55"W - 5312.93' (Meas.)  
S89°59'W - 80.02 (G.L.O.)

Found 1991 Aluminum  
Cap in Pile of Stones.  
Fence Post on East  
side of Cap.

**NOTES:**

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
- The Bottom of hole bears N15°13'41"E 534.67' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



SCALE

**SURVEYOR'S CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR  
No. 6028691  
JOHN R. HAUGH  
STATE OF UTAH  
2-14-11

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD: NBU 1022-12A**

**NBU 1022-12A1BS  
WELL PLAT**

81' FNL, 481' FEL (Bottom Hole)  
NE ¼ NE ¼ OF SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH.



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

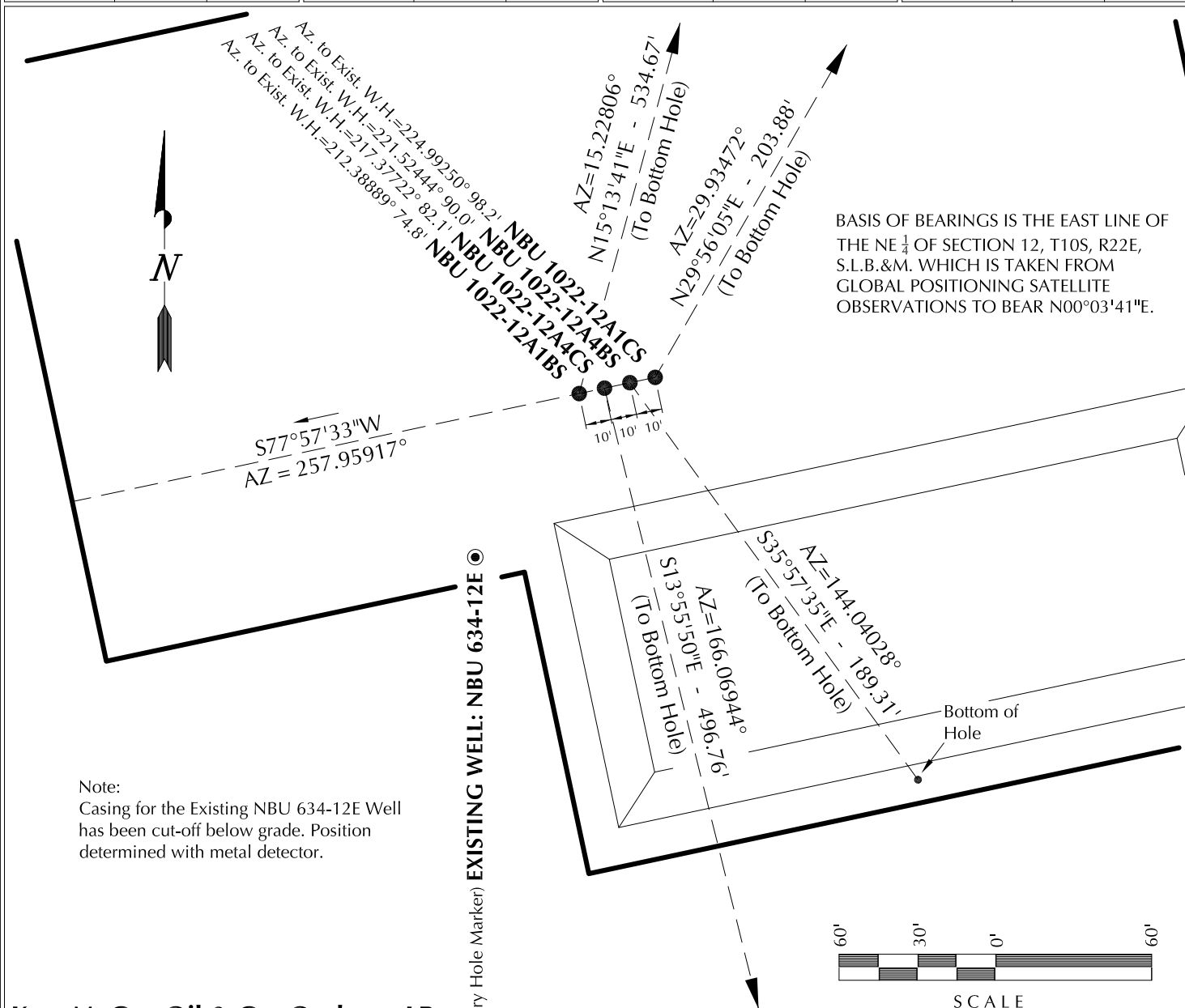
DATE SURVEYED: 02-01-11	SURVEYED BY: R.Y.	SHEET NO:
DATE DRAWN: 02-11-11	DRAWN BY: E.M.S.	<b>4</b>
SCALE: 1" = 1000'	Date Last Revised:	4 OF 16

**RECEIVED: September 09, 2011**

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 1022-12A1CS	39°58'08.539"	109°22'51.428"	39°58'08.662"	109°22'48.979"	591' FNL	39°58'10.284"	109°22'50.119"	39°58'10.407"	109°22'47.671"	414' FNL
NBU 1022-12A4BS	39°58'08.519"	109°22'51.553"	39°58'08.642"	109°22'49.105"	592' FEL	39°58'07.004"	109°22'50.128"	39°58'07.127"	109°22'47.679"	746' FNL
NBU 1022-12A4CS	39°58'08.498"	109°22'51.679"	39°58'08.621"	109°22'49.230"	596' FNL	39°58'03.734"	109°22'50.149"	39°58'03.857"	109°22'47.701"	1077' FNL
NBU 1022-12A1BS	39°58'08.478"	109°22'51.805"	39°58'08.601"	109°22'49.356"	593' FNL	39°58'13.573"	109°22'49.995"	39°58'13.697"	109°22'47.546"	81' FNL
NBU 634-12E	39°58'07.854"	109°22'52.320"	39°58'07.977"	109°22'49.871"	661' FNL	39°58'07.854"	109°22'52.320"	39°58'07.977"	109°22'49.871"	661' FEL

## RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 1022-12A1CS	176.7'	101.7'	NBU 1022-12A4BS	-153.2'	111.2'	NBU 1022-12A4CS	-482.1'	119.6'	NBU 1022-12A1BS	515.9'	140.4'



**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-12A**

**WELL PAD INTERFERENCE PLAT**  
WELLS - NBU 1022-12A1CS, NBU 1022-12A4BS,  
NBU 1022-12A4CS & NBU 1022-12A1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH.



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

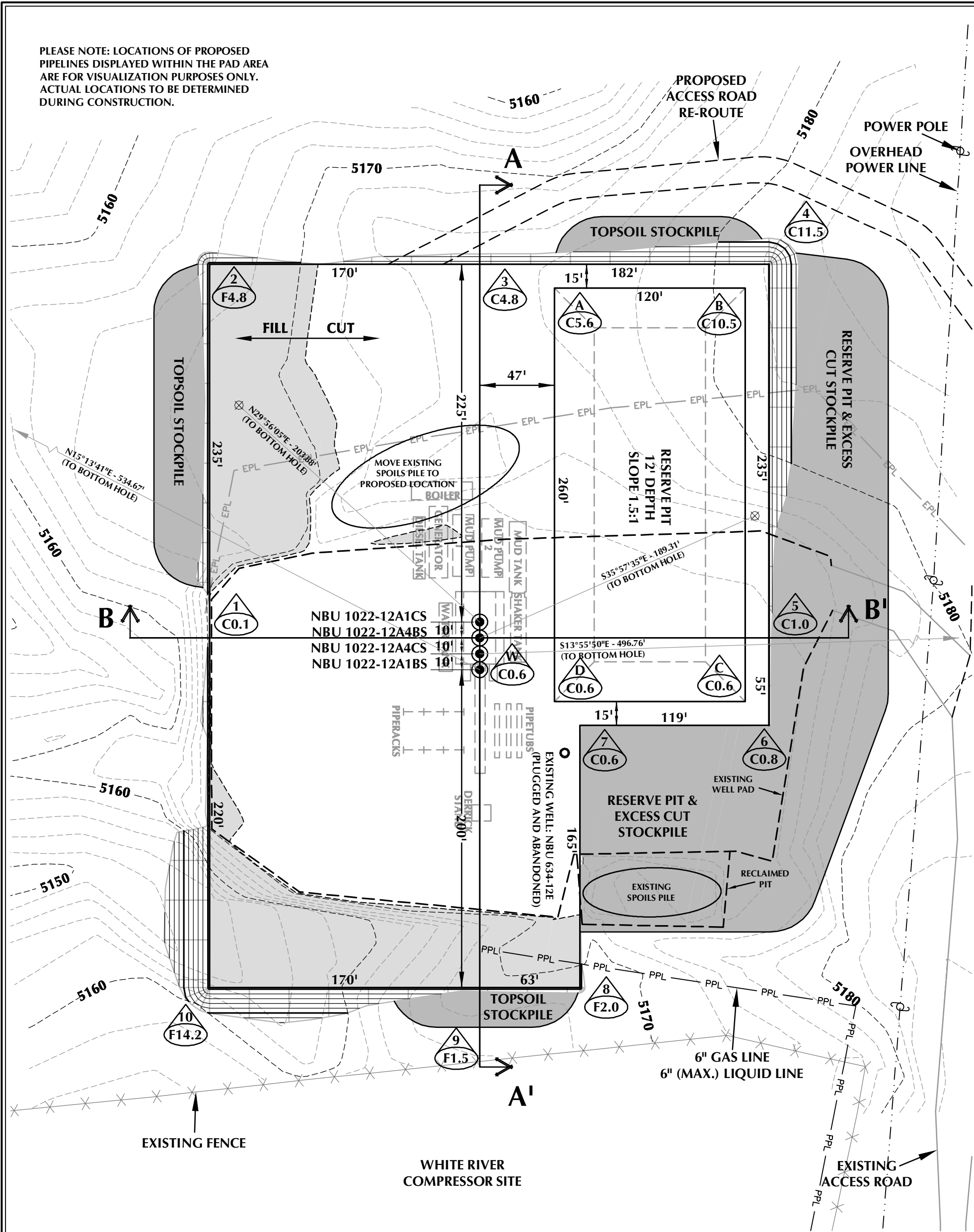
**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

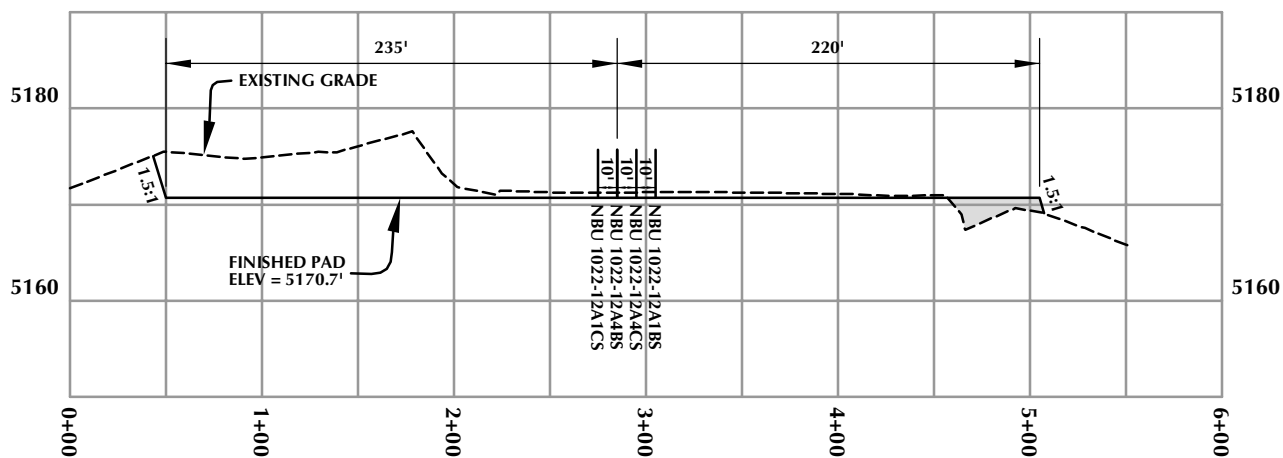
DATE SURVEYED: 02-01-11	SURVEYED BY: R.Y.	SHEET NO: <b>5</b> 5 OF 16
DATE DRAWN: 02-11-11	DRAWN BY: E.M.S.	
SCALE: 1" = 60'	Date Last Revised:	

**RECEIVED: September 09, 2011**

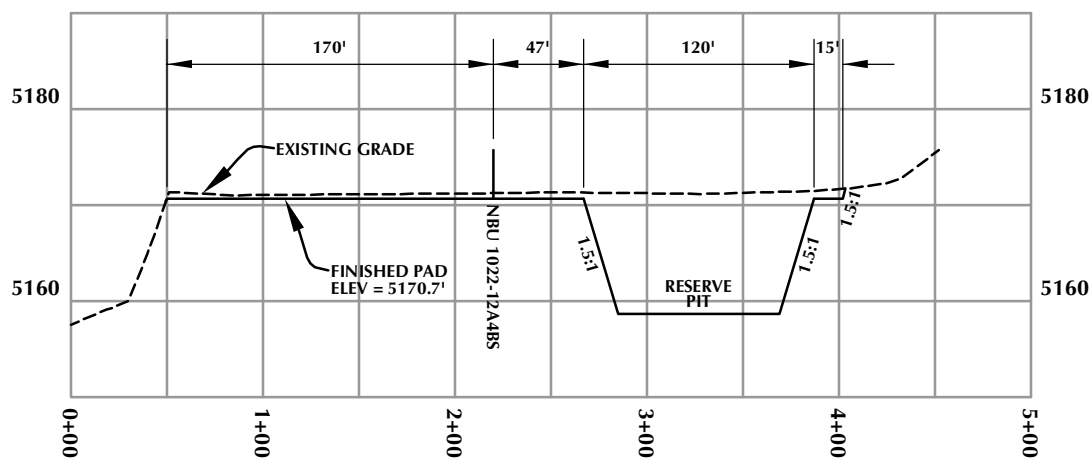


REVISED: 4/19/11 6 6 OF 16

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**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-12A**

**WELL PAD - CROSS SECTIONS**  
NBU 1022-12A1CS, NBU 1022-12A4BS,  
NBU 1022-12A4CS & NBU 1022-12A1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH



**CONSULTING, LLC**  
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**TIMBERLINE**  
**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

**HORIZONTAL** 0 50' 100' 1" = 100'  
**VERTICAL** 0 10' 20' 1" = 20'

Scale: 1"=100'  
REVISED:

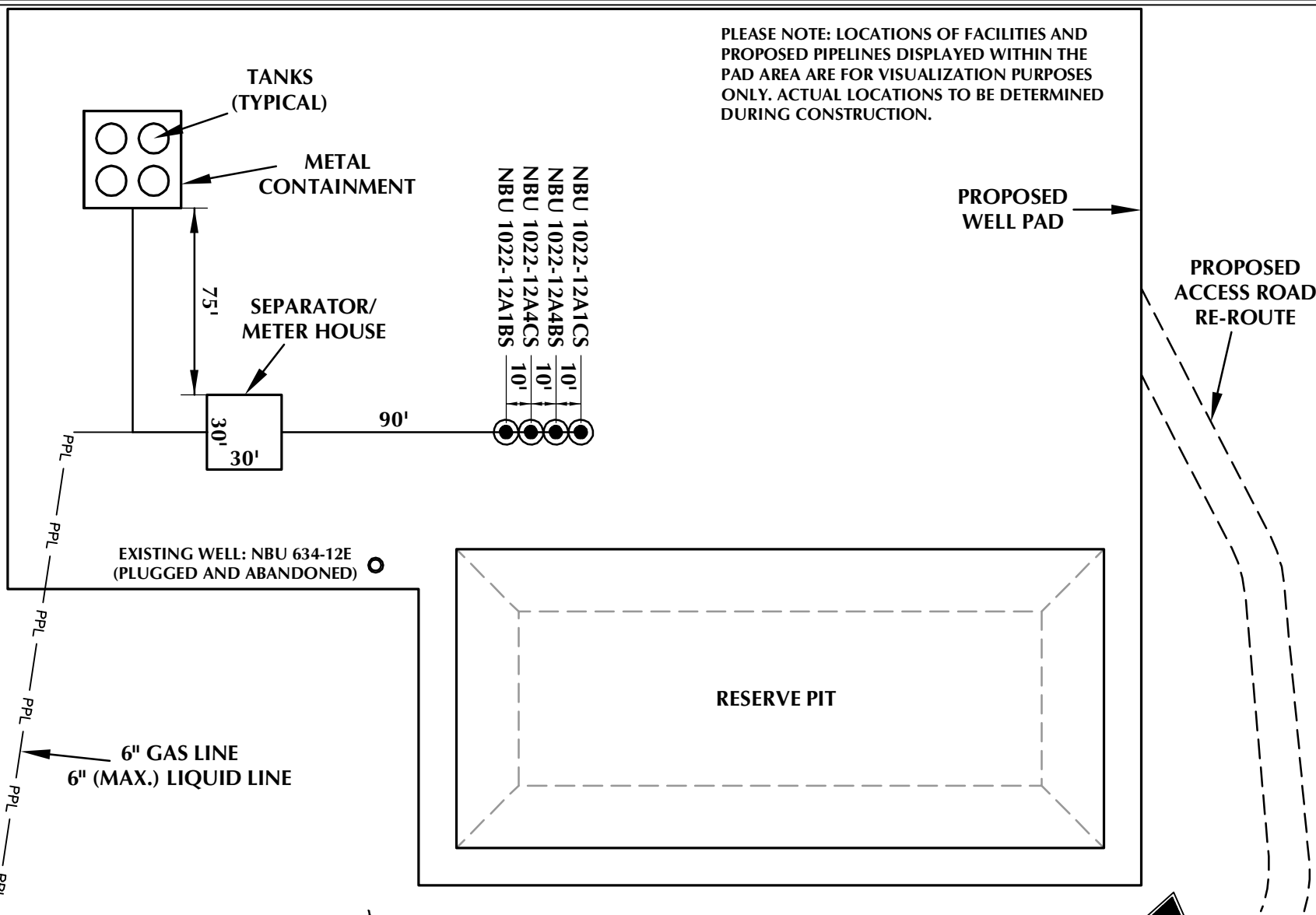
Date: 3/8/11

SHEET NO:

**7**

7 OF 16

**RECEIVED: September 09, 2011**



PLEASE NOTE: LOCATIONS OF FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-12A**

**WELL PAD - FACILITIES DIAGRAM**  
NBU 1022-12A1CS, NBU 1022-12A4BS,  
NBU 1022-12A4CS & NBU 1022-12A1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH



**CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**WELL PAD LEGEND**

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE



HORIZONTAL 0 30' 60' 1" = 60'

**TIMBERLINE**  
ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST • VERNAL, UTAH 84078  
(435) 789-1365

Scale: 1"=60' Date: 3/8/11  
REVISED: GRB 4/19/11

SHEET NO:  
**8**  
8 OF 16

K:\ANADARKO\2010\64\_NBU\_FOCUS\_1022-12\DWG\NBU\_1022-12A\_PAD\_20110419.dwg, 4/19/2011 3:17:06 PM

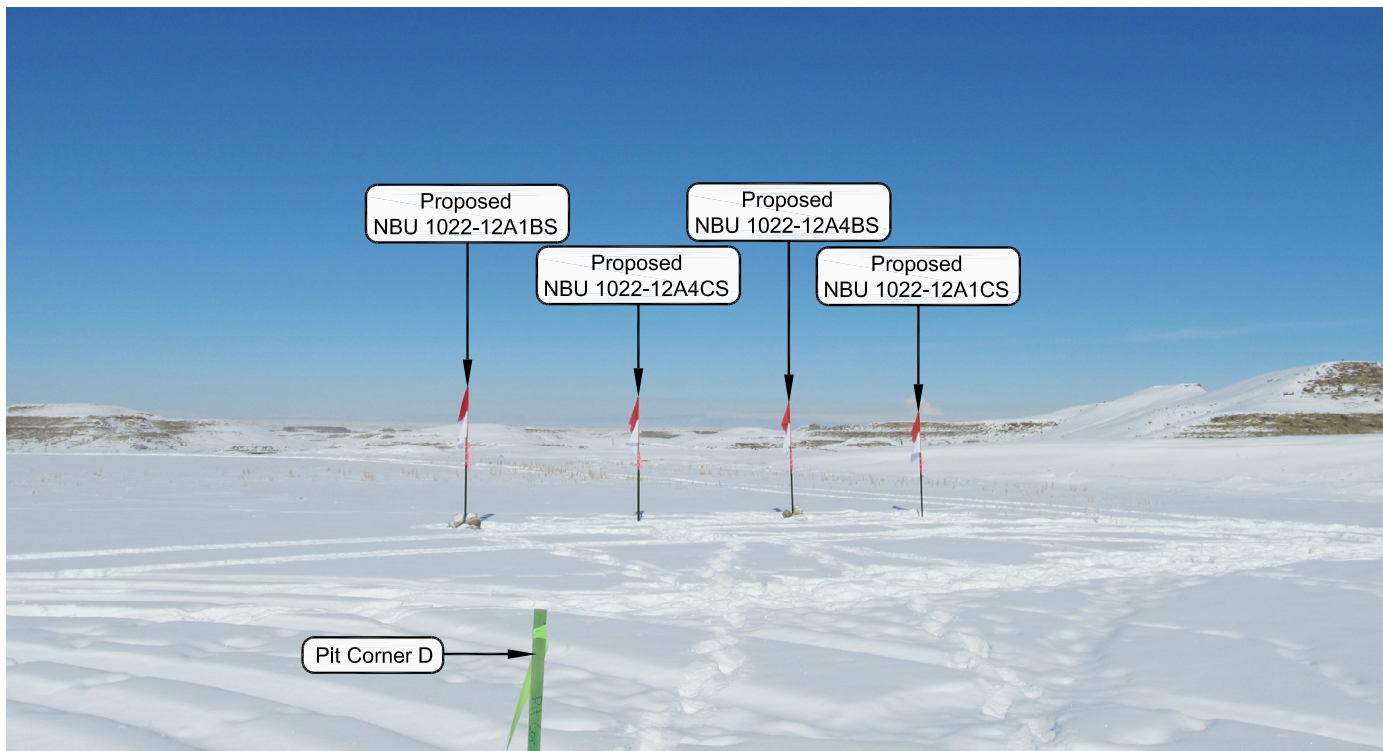


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

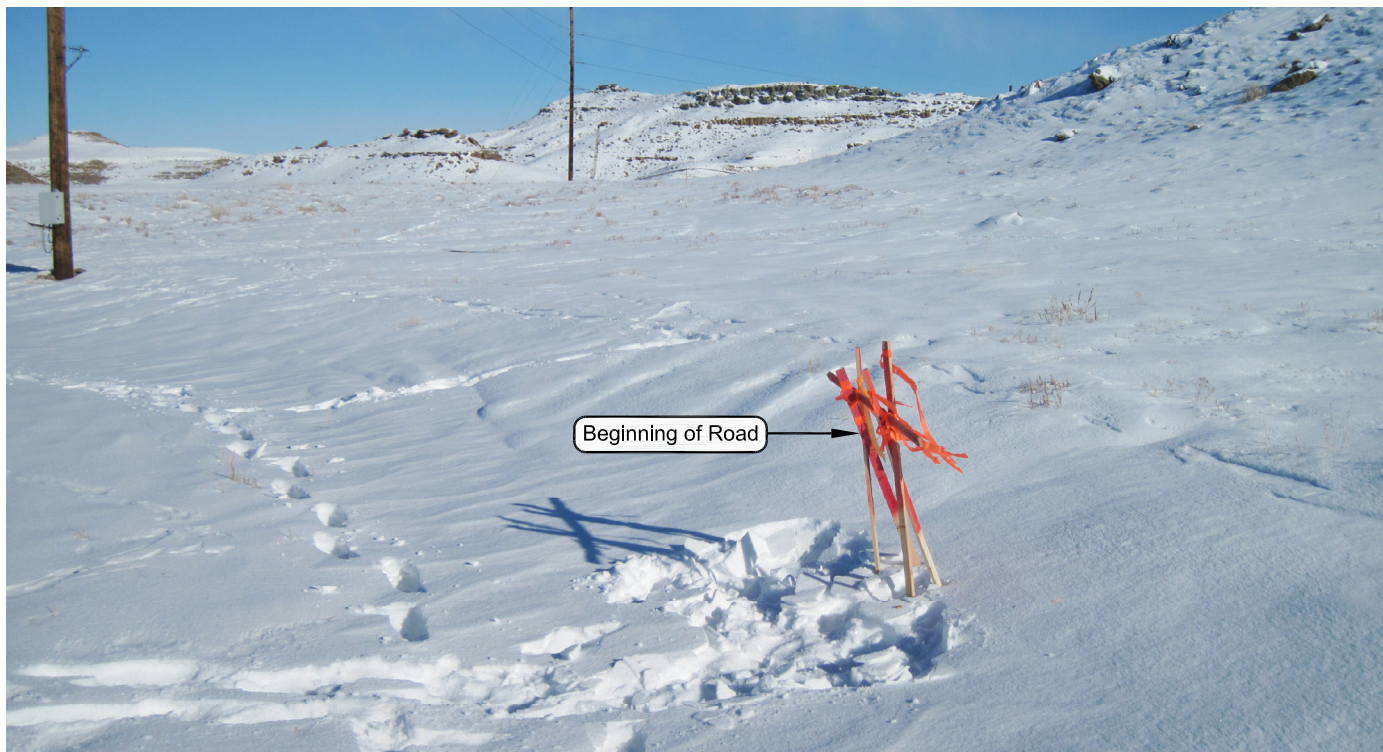


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 1022-12A**

**LOCATION PHOTOS**  
NBU 1022-12A1CS, NBU 1022-12A4BS,  
NBU 1022-12A4CS & NBU 1022-12A1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH.



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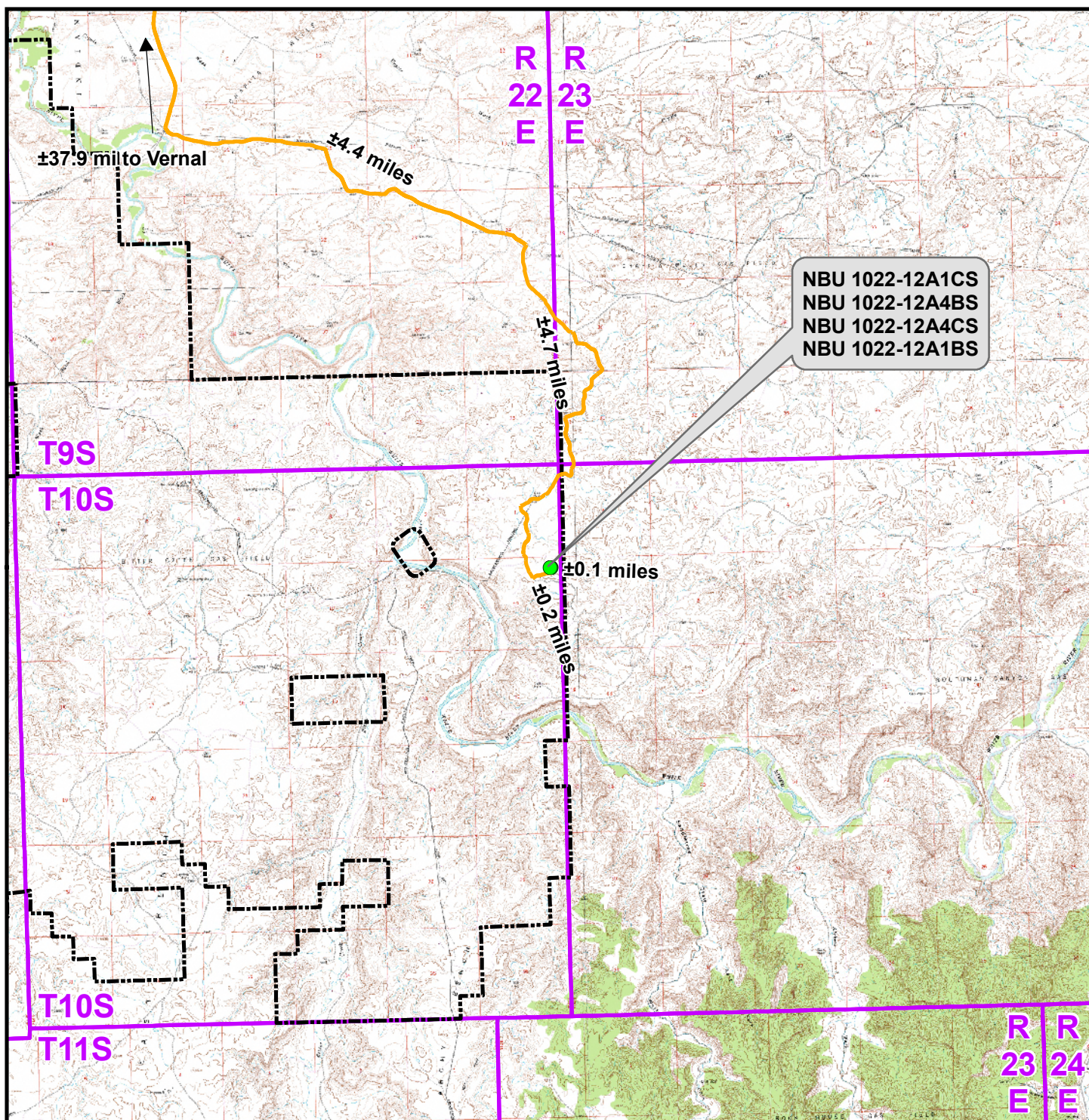
**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 02-01-11	PHOTOS TAKEN BY: R.Y.	SHEET NO:  <b>9</b>  9 OF 16
DATE DRAWN: 02-11-11	DRAWN BY: E.M.S.	
Date Last Revised:		

**RECEIVED: September 09, 2011**



### Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 1022-12A To Unit Boundary: ±592ft

**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 1022-12A

#### TOPO A

NBU 1022-12A1CS, NBU 1022-12A4BS,  
 NBU 1022-12A4CS & NBU 1022-12A1BS  
 LOCATED IN SECTION 12, T10S, R22E,  
 S.L.B.&M., UTAH COUNTY, UTAH



**609 CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1:100,000

NAD83 USP Central

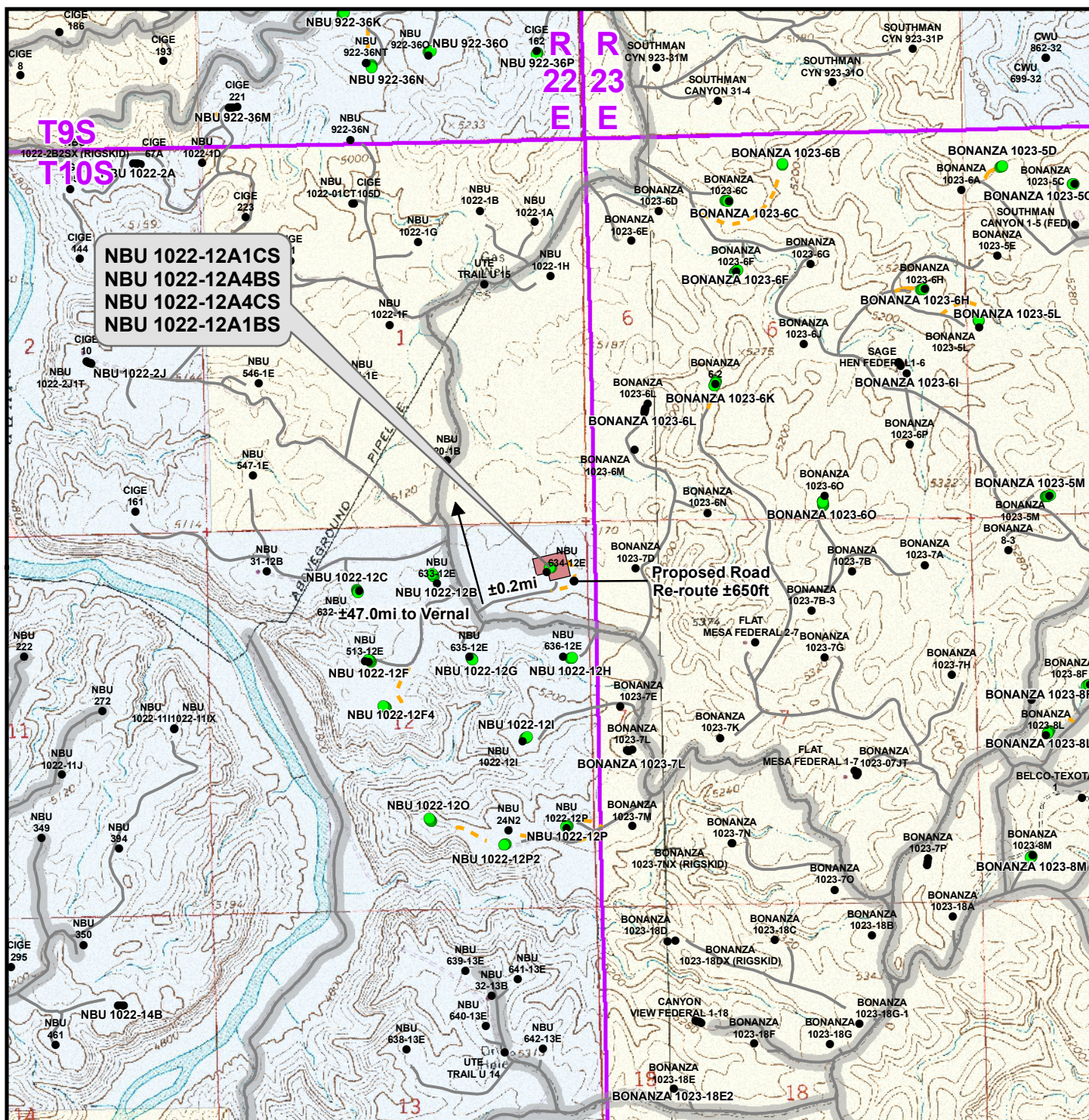
Sheet No:

Drawn: TL  
 Revised:

Date: 8 Mar 2011  
 Date:

**10** 10 of 16

**RECEIVED: September 09, 2011**



### Legend

- |                   |                   |                      |               |                             |         |
|-------------------|-------------------|----------------------|---------------|-----------------------------|---------|
| ● Well - Proposed | ■ Well Pad        | --- Road - Proposed  | — County Road | ■ Bureau of Land Management | ■ State |
| ● Well - Existing | — Road - Existing | ■ Indian Reservation | ■ Private     |                             |         |

Total Proposed Road Re-Route Length: ±650ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 1022-12A**

**TOPO B**

**NBU 1022-12A1CS, NBU 1022-12A4BS,  
NBU 1022-12A4CS & NBU 1022-12A1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH**

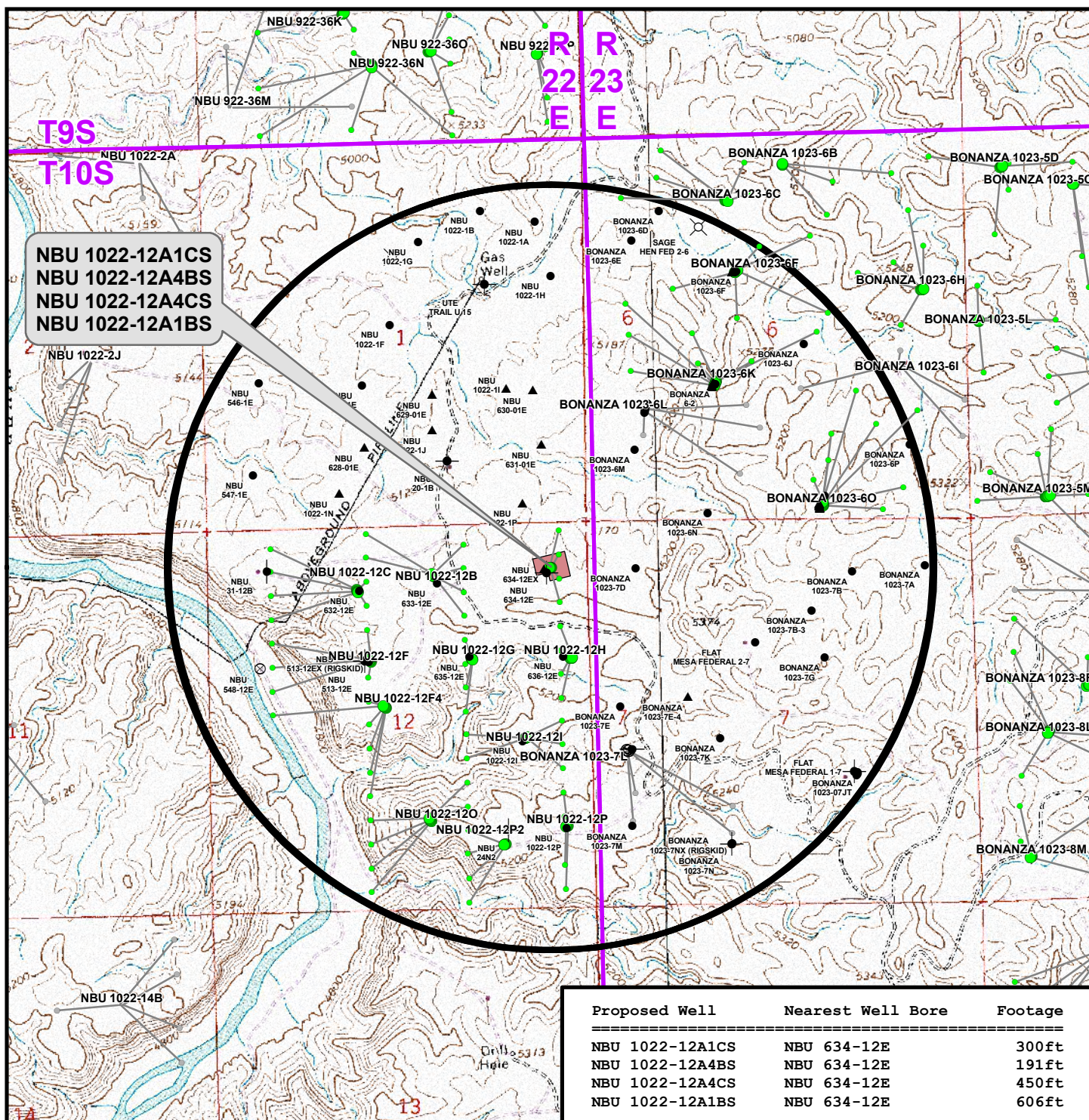


**CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 8 Mar 2011	<b>11</b>
Revised:	Date:	11 of 16

**RECEIVED: September 09, 2011**



**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 1022-12A**

**TOPO C**

NBU 1022-12A1CS, NBU 1022-12A4BS,  
NBU 1022-12A4CS & NBU 1022-12A1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UINTAH COUNTY, UTAH

**609**  
**CONSULTING, LLC**  
2155 North Main Street  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1" = 2,000ft

NAD83 USP Central

Sheet No:

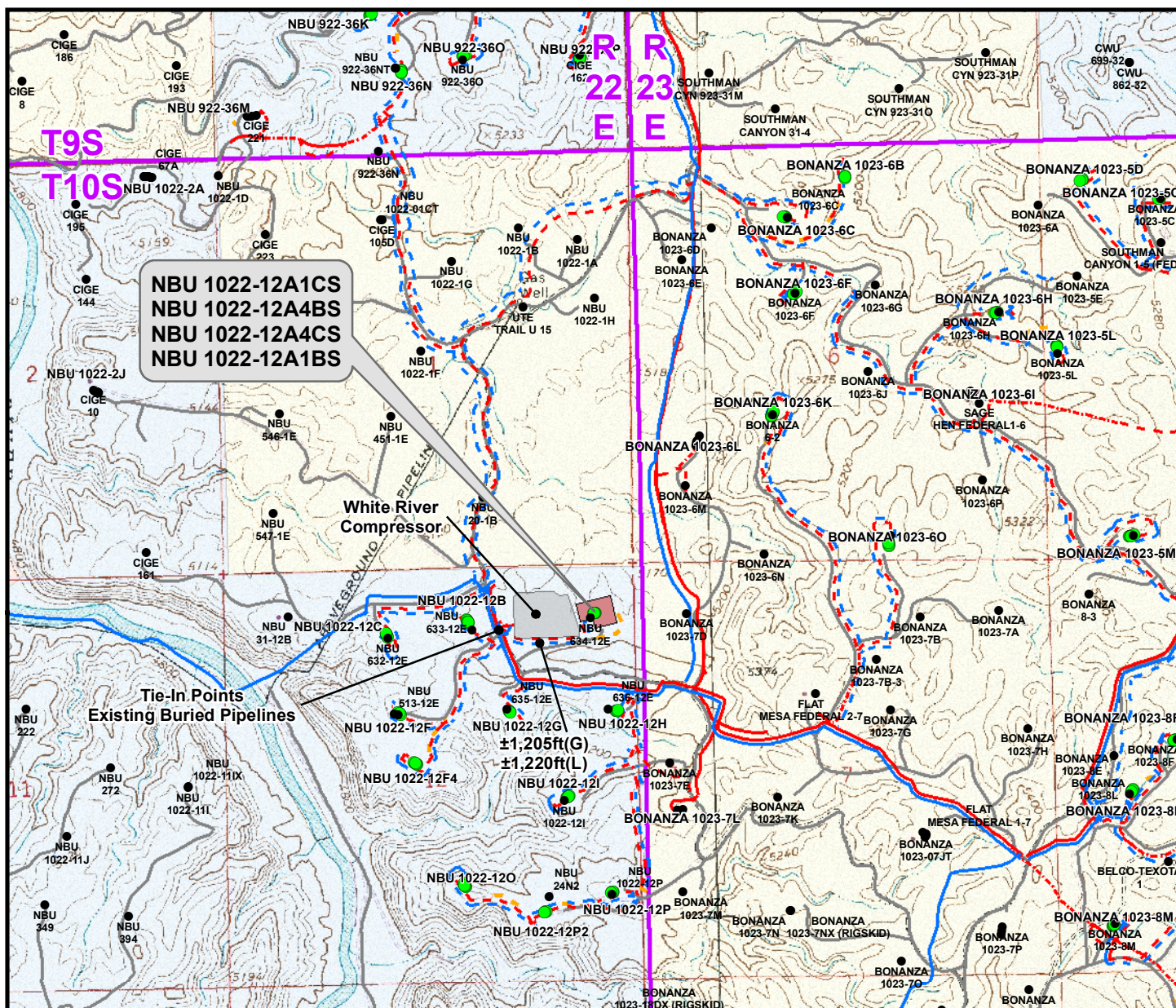
Drawn: TL  
Revised:

Date: 8 Mar 2011  
Date:

**12**

12 of 16

**RECEIVED: September 09, 2011**



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±135ft
Proposed 6" (Max.) (Edge of Pad to Edge of White River Compressor)	±215ft
Proposed 6" (Max.) (Across White River Compressor)	±835ft
Proposed 6" (Max.) (Edge of White River Compressor to Existing Buried Liquid Pipeline)	±170ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±1,355ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±135ft
Proposed 6" (Edge of Pad to Edge of White River Compressor)	±215ft
Proposed 6" (Across White River Compressor)	±835ft
Proposed 6" (Edge of White River Compressor to Existing Buried 16" Gas Pipeline)	±155ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±1,340ft</b>

### Legend

- Well - Proposed    ■ Well Pad    - - - Gas Pipeline - Proposed    - - - Liquid Pipeline - Proposed    - - - Road - Proposed    ■ Bureau of Land Management
- Well - Existing    - - - Gas Pipeline - To Be Upgraded    - - - Liquid Pipeline - Existing    - - - Road - Existing    ■ Indian Reservation
- - - Gas Pipeline - Existing    - - - Liquid Pipeline - Existing    - - - Road - Existing    ■ State
- - - Gas Pipeline - Existing    - - - Liquid Pipeline - Existing    - - - Road - Existing    ■ Private

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 1022-12A

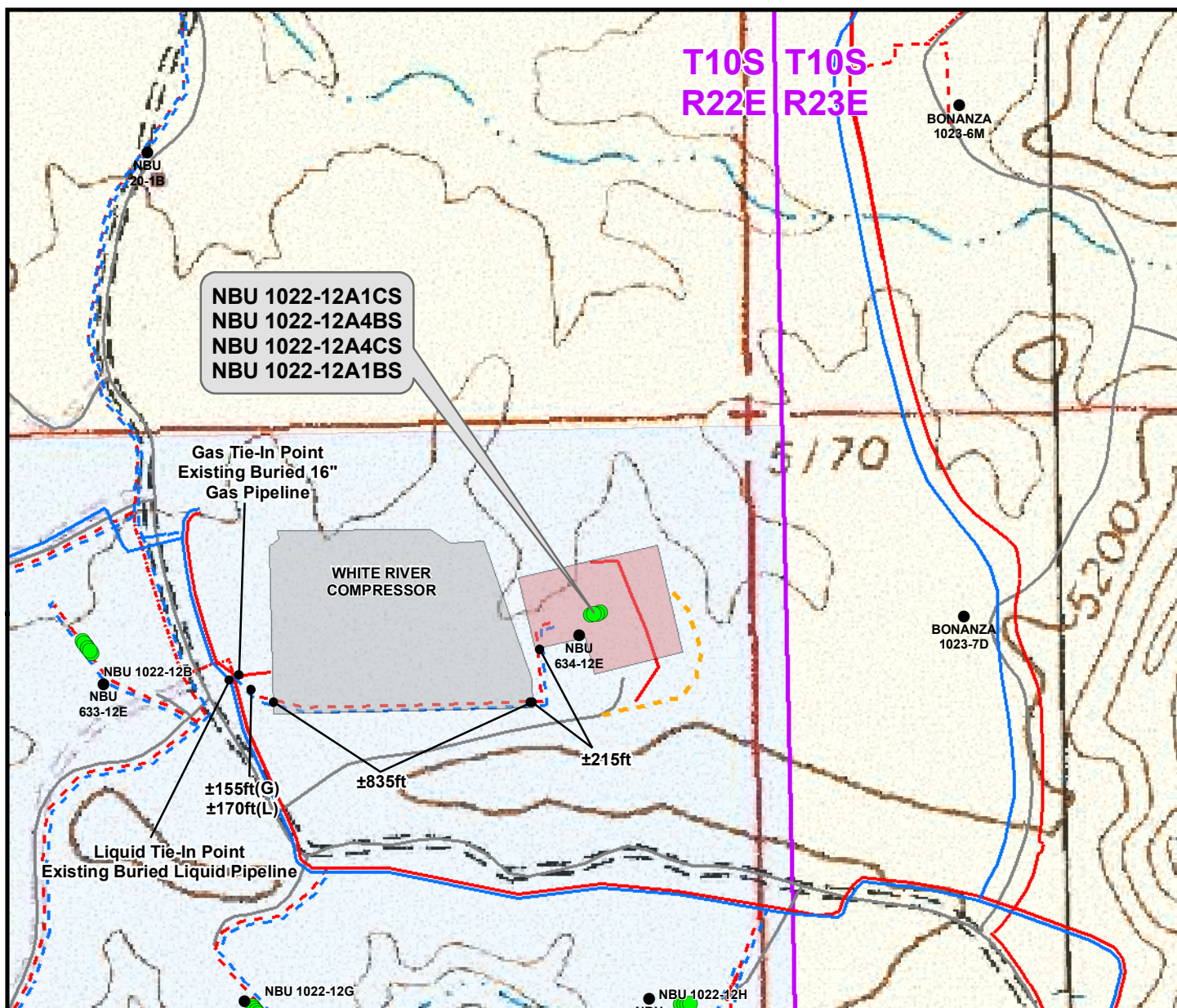
#### TOPO D

NBU 1022-12A1CS, NBU 1022-12A4BS,  
NBU 1022-12A4CS & NBU 1022-12A1BS  
LOCATED IN SECTION 12, T10S, R22E,  
S.L.B.&M., UTAH COUNTY, UTAH



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: TL	Date: 8 Mar 2011	<b>13</b> 13 of 16
Revised: TL	Date: 19 Apr 2011	

**RECEIVED: September 09, 2011**



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±135ft
Proposed 6" (Max.) (Edge of Pad to Edge of White River Compressor)	±215ft
Proposed 6" (Max.) (Across White River Compressor)	±835ft
Proposed 6" (Max.) (Edge of White River Compressor to Existing Buried Liquid Pipeline)	±170ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>±1,355ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±135ft
Proposed 6" (Edge of Pad to Edge of White River Compressor)	±215ft
Proposed 6" (Across White River Compressor)	±835ft
Proposed 6" (Edge of White River Compressor to Existing Buried 16" Gas Pipeline)	±155ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±1,340ft</b>

### Legend

- Well - Proposed   
  Well Pad   
 --- Gas Pipeline - Proposed   
 --- Liquid Pipeline - Proposed   
 --- Road - Proposed   
  Bureau of Land Management
- Well - Existing   
 --- Gas Pipeline - To Be Upgraded   
 --- Liquid Pipeline - Existing   
 --- Road - Existing   
  Indian Reservation
- Gas Pipeline - Existing   
 State   
 Private

**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 1022-12A

**TOPO D2 (PAD & PIPELINE DETAIL)**  
 NBU 1022-12A1CS, NBU 1022-12A4BS,  
 NBU 1022-12A4CS & NBU 1022-12A1BS  
 LOCATED IN SECTION 12, T10S, R22E,  
 S.L.B.&M., UINTAH COUNTY, UTAH

**609**  
**CONSULTING, LLC**  
 2155 North Main Street  
 Sheridan, WY 82801  
 Phone (307) 674-0609  
 Fax (307) 674-0182



Scale: 1" = 500ft		NAD83 USP Central	Sheet No:
Drawn: TL	Date: 8 Mar 2011	<div style="font-size: 2em; font-weight: bold;">14</div> <div style="font-weight: bold;">14 of 16</div>	
Revised: TL	Date: 19 Apr 2011		

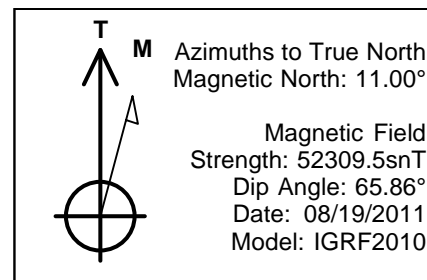
RECEIVED: September 09, 2011



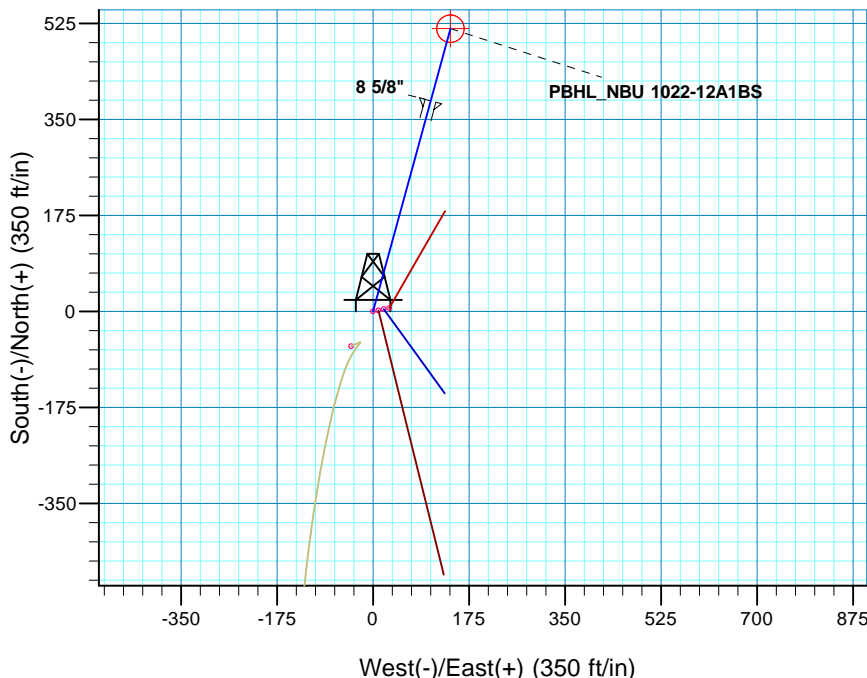
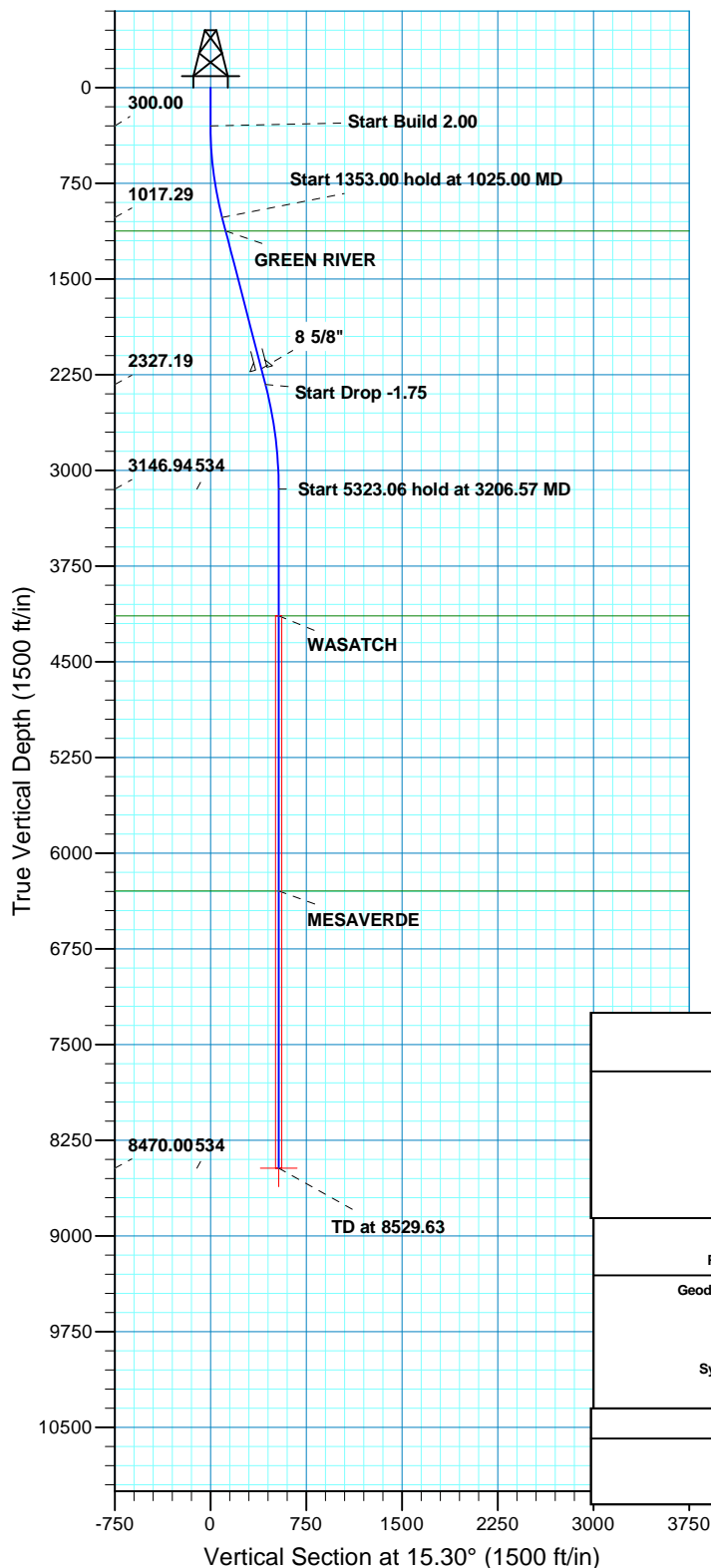
**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD – NBU 1022-12A**  
**WELLS – NBU 1022-12A1CS, NBU 1022-12A4BS,**  
**NBU 1022-12A4CS & NBU 1022-12A1BS**  
**Section 12, T10S, R22E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Fidler Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge at the White River. Exit left and proceed in a southeasterly direction along the Fidler Road approximately 4.4 miles to the intersection of the Seven Sisters Road (County B Road 3420). Exit right and proceed in a southeasterly, then southerly direction along the Seven Sisters Road approximately 4.7 miles to a service road to the northeast. Exit left and proceed in a northeasterly direction along the service road approximately 0.2 miles to the proposed access road. Follow road flags in a northeasterly, then northwesterly direction approximately 650 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 47.3 miles in a southerly direction.



WELL DETAILS: NBU 1022-12A1BS						
GL 5171 & 4 @ 5175.00ft (ASSUMED)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	14518897.44	2094220.90	39° 58' 8.602 N	109° 22' 49.357 W	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
PBHL	8470.00	515.37	140.96	14519415.28	2094352.48	39° 58' 13.696 N
- plan hits target center						
Longitude	Shape					
109° 22' 47.546 W	Circle (Radius: 25.00)					



SECTION DETAILS									
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1025.00	14.50	15.30	1017.29	88.02	24.07	2.00	15.30	91.25	
2378.00	14.50	15.30	2327.19	414.78	113.45	0.00	0.00	430.01	
3206.57	0.00	0.00	3146.94	515.37	140.96	1.75	180.00	534.30	
8529.63	0.00	0.00	8470.00	515.37	140.96	0.00	0.00	534.30	PBHL_NBU 1022-12A1BS
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N						FORMATION TOP DETAILS			
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 12 T10S R22E System Datum: Mean Sea Level						TVDPath	MDPath	Formation	
						1124.00	1135.23	GREEN RIVER	
						4141.00	4200.63	WASATCH	
						6296.00	6355.63	MESAVERDE	
CASING DETAILS									
			TVD	MD	Name	Size			
			2204.00	2250.76	8 5/8"	8.625			
000 3750						Plan: PLAN #1 PRELIMINARY (NBU 1022-12A1BS/OH)			
n)						Created By: RobertScott Date: 15:03, August 19 2011			

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# **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 1022-12A PAD**

**NBU 1022-12A1BS**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**19 August, 2011**





# SDI Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-12A1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-12A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-12A1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 1022-12A PAD, SECTION 12 T10S R22E		
<b>Site Position:</b>		<b>Northing:</b>	14,518,904.17 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,094,250.21 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	39° 58' 8.663 N
		<b>Longitude:</b>	109° 22' 48.979 W
		<b>Grid Convergence:</b>	1.04 °

<b>Well</b>	NBU 1022-12A1BS, 598 FNL 621 FEL		
<b>Well Position</b>	<b>+N/-S</b>	-6.19 ft	<b>Northing:</b> 14,518,897.44 usft
	<b>+E/-W</b>	-29.43 ft	<b>Easting:</b> 2,094,220.90 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	5,171.00 ft
		<b>Latitude:</b>	39° 58' 8.602 N
		<b>Longitude:</b>	109° 22' 49.357 W
		<b>Ground Level:</b>	

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	08/19/11	11.00	65.86	52,310

<b>Design</b>	PLAN #1 PRELIMINARY			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	15.30

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,025.00	14.50	15.30	1,017.29	88.02	24.07	2.00	2.00	0.00	15.30	
2,378.00	14.50	15.30	2,327.19	414.78	113.45	0.00	0.00	0.00	0.00	
3,206.57	0.00	0.00	3,146.94	515.37	140.96	1.75	-1.75	0.00	180.00	
8,529.63	0.00	0.00	8,470.00	515.37	140.96	0.00	0.00	0.00	0.00	PBHL_NBU 1022-12A



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-12A1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-12A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-12A1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.00	2.00	15.30	399.98	1.68	0.46	1.75	2.00	2.00	0.00
500.00	4.00	15.30	499.84	6.73	1.84	6.98	2.00	2.00	0.00
600.00	6.00	15.30	599.45	15.14	4.14	15.69	2.00	2.00	0.00
700.00	8.00	15.30	698.70	26.89	7.36	27.88	2.00	2.00	0.00
800.00	10.00	15.30	797.47	41.98	11.48	43.52	2.00	2.00	0.00
900.00	12.00	15.30	895.62	60.38	16.52	62.60	2.00	2.00	0.00
1,000.00	14.00	15.30	993.06	82.08	22.45	85.10	2.00	2.00	0.00
1,025.00	14.50	15.30	1,017.29	88.02	24.07	91.25	2.00	2.00	0.00
<b>Start 1353.00 hold at 1025.00 MD</b>									
1,100.00	14.50	15.30	1,089.90	106.13	29.03	110.03	0.00	0.00	0.00
1,135.23	14.50	15.30	1,124.00	114.64	31.36	118.85	0.00	0.00	0.00
<b>GREEN RIVER</b>									
1,200.00	14.50	15.30	1,186.71	130.28	35.63	135.07	0.00	0.00	0.00
1,300.00	14.50	15.30	1,283.53	154.43	42.24	160.10	0.00	0.00	0.00
1,400.00	14.50	15.30	1,380.34	178.58	48.85	185.14	0.00	0.00	0.00
1,500.00	14.50	15.30	1,477.16	202.73	55.45	210.18	0.00	0.00	0.00
1,600.00	14.50	15.30	1,573.97	226.88	62.06	235.22	0.00	0.00	0.00
1,700.00	14.50	15.30	1,670.79	251.04	68.66	260.26	0.00	0.00	0.00
1,800.00	14.50	15.30	1,767.60	275.19	75.27	285.29	0.00	0.00	0.00
1,900.00	14.50	15.30	1,864.42	299.34	81.87	310.33	0.00	0.00	0.00
2,000.00	14.50	15.30	1,961.23	323.49	88.48	335.37	0.00	0.00	0.00
2,100.00	14.50	15.30	2,058.04	347.64	95.09	360.41	0.00	0.00	0.00
2,200.00	14.50	15.30	2,154.86	371.79	101.69	385.45	0.00	0.00	0.00
2,250.76	14.50	15.30	2,204.00	384.05	105.04	398.16	0.00	0.00	0.00
<b>8 5/8"</b>									
2,300.00	14.50	15.30	2,251.67	395.94	108.30	410.48	0.00	0.00	0.00
2,378.00	14.50	15.30	2,327.19	414.78	113.45	430.01	0.00	0.00	0.00
<b>Start Drop -1.75</b>									
2,400.00	14.11	15.30	2,348.51	420.02	114.88	435.45	1.75	-1.75	0.00
2,500.00	12.36	15.30	2,445.85	442.11	120.93	458.35	1.75	-1.75	0.00
2,600.00	10.61	15.30	2,543.84	461.33	126.18	478.27	1.75	-1.75	0.00
2,700.00	8.86	15.30	2,642.39	477.64	130.65	495.19	1.75	-1.75	0.00
2,800.00	7.11	15.30	2,741.42	491.05	134.31	509.09	1.75	-1.75	0.00
2,900.00	5.36	15.30	2,840.82	501.54	137.18	519.96	1.75	-1.75	0.00
3,000.00	3.61	15.30	2,940.51	509.09	139.25	527.79	1.75	-1.75	0.00
3,100.00	1.86	15.30	3,040.39	513.70	140.51	532.57	1.75	-1.75	0.00
3,200.00	0.11	15.30	3,140.37	515.36	140.96	534.29	1.75	-1.75	0.00
3,206.57	0.00	0.00	3,146.94	515.37	140.96	534.30	1.75	-1.75	0.00
<b>Start 5323.06 hold at 3206.57 MD</b>									
3,300.00	0.00	0.00	3,240.37	515.37	140.96	534.30	0.00	0.00	0.00
3,400.00	0.00	0.00	3,340.37	515.37	140.96	534.30	0.00	0.00	0.00
3,500.00	0.00	0.00	3,440.37	515.37	140.96	534.30	0.00	0.00	0.00
3,600.00	0.00	0.00	3,540.37	515.37	140.96	534.30	0.00	0.00	0.00
3,700.00	0.00	0.00	3,640.37	515.37	140.96	534.30	0.00	0.00	0.00
3,800.00	0.00	0.00	3,740.37	515.37	140.96	534.30	0.00	0.00	0.00
3,900.00	0.00	0.00	3,840.37	515.37	140.96	534.30	0.00	0.00	0.00



**SDI**  
Planning Report



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-12A1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-12A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-12A1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,000.00	0.00	0.00	3,940.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,040.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,140.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,200.63	0.00	0.00	4,141.00	515.37	140.96	534.30	0.00	0.00	0.00	
<b>WASATCH</b>										
4,300.00	0.00	0.00	4,240.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,340.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,440.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,540.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,640.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,740.37	515.37	140.96	534.30	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,840.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,940.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,040.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,140.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,240.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,340.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,440.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,540.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,640.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,740.37	515.37	140.96	534.30	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,840.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,940.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,040.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,140.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,240.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,355.63	0.00	0.00	6,296.00	515.37	140.96	534.30	0.00	0.00	0.00	
<b>MESAVERDE</b>										
6,400.00	0.00	0.00	6,340.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,440.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,540.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,640.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,740.37	515.37	140.96	534.30	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,840.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,940.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,040.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,140.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,240.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,340.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,440.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,540.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,640.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,740.37	515.37	140.96	534.30	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,840.37	515.37	140.96	534.30	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,940.37	515.37	140.96	534.30	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,040.37	515.37	140.96	534.30	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,140.37	515.37	140.96	534.30	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,240.37	515.37	140.96	534.30	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,340.37	515.37	140.96	534.30	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,440.37	515.37	140.96	534.30	0.00	0.00	0.00	
8,529.63	0.00	0.00	8,470.00	515.37	140.96	534.30	0.00	0.00	0.00	
<b>PBHL_NBU 1022-12A1BS</b>										

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 1022-12A1BS
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Project:</b>	UTAH - UTM (feet), NAD27, Zone 12N	<b>MD Reference:</b>	GL 5171 & 4 @ 5175.00ft (ASSUMED)
<b>Site:</b>	NBU 1022-12A PAD	<b>North Reference:</b>	True
<b>Well:</b>	NBU 1022-12A1BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_NBU 1022-12A1E	0.00	0.00	8,470.00	515.37	140.96	14,519,415.29	2,094,352.48	39° 58' 13.696 N	109° 22' 47.546 W
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,250.76	2,204.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,135.23	1,120.00	GREEN RIVER			
4,200.63	4,137.00	WASATCH			
6,355.63	6,292.00	MESAVERDE			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,025.00	1,017.29	88.02	24.07	Start 1353.00 hold at 1025.00 MD
2,378.00	2,327.19	414.78	113.45	Start Drop -1.75
3,206.57	3,146.94	515.37	140.96	Start 5323.06 hold at 3206.57 MD
8,529.63	8,470.00	515.37	140.96	TD at 8529.63

NBU 1022-12A1BS/ 1022-12A1CS/  
1022-12A4BS/ 1022-12A4CS

Surface Use Plan of Operations  
1 of 8

<b>NBU 1022-12A1BS</b>			
Surface:	598 FNL / 621 FEL	NENE	Lot
BHL:	81 FNL / 481 FEL	NENE	Lot
<b>NBU 1022-12A1CS</b>			
Surface:	591 FNL / 592 FEL	NENE	Lot
BHL:	414 FNL / 490 FEL	NENE	Lot
<b>NBU 1022-12A4BS</b>			
Surface:	593 FNL / 601 FEL	NENE	Lot
BHL:	746 FNL / 490 FEL	NENE	Lot
<b>NBU 1022-12A4CS</b>			
Surface:	596 FNL / 611 FEL	NENE	Lot
BHL:	1077 FNL / 491 FEL	NENE	Lot

**Pad: NBU 1022-12A PAD**

Section 12 T10S R22E

Mineral Lease: UT ST UO 01197-A ST

Uintah County, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

**A. Existing Roads:**

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

**B. Planned Access Roads:**

One new access road is proposed (see Topo Map B). The  $\pm 650'$  reroute will travel from the middle of the East side of the pad around the SE corner of the pad to the existing access road. Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

**C. Location of Existing and Proposed Facilities:**

This pad will expand the existing pad for the NBU 634-12E. The NBU 634-12E well is a vertical well that was plugged and abandoned on May 31, 2008 according to the status on the UDOGM website on 06/15/2011.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

**Gathering Facilities:**

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 1,340'$  and the individual segments are broken up as follows:

$\pm 135'$  (0.03 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±1,205' (0.2 miles) –New 6" buried gas pipeline from edge of the pad to the SE corner of the White River Compressor traveling east to the tie-in at the existing buried 16" gas pipeline. Please refer to Topo D & D2.

The total liquid gathering pipeline distance from the separator to the tie in point is ±1,355' and the individual segments are broken up as follows:

- ±135' (0.03 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±1,220' (0.2 miles) –New 6" buried liquid pipeline from the edge of the pad to the SE corner of the White River Compressor. Traveling east to tie-in to the existing buried liquid pipeline. Please refer to Topo D & D2.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

#### **D. Location and Type of Water Supply:**

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**E. Source of Construction Materials:**

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

**F. Methods for Handling Waste Materials:**

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E  
Ouray #1 SWD in Sec. 1 T9S R21E  
NBU 159 SWD in Sec. 35 T9S R21E  
CIGE 112D SWD in Sec. 19 T9S R21E  
CIGE 114 SWD in Sec. 34 T9S R21E  
NBU 921-34K SWD in Sec. 34 T9S R21E  
NBU 921-33F SWD in Sec. 33 T9S R21E  
NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure.

Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification.)

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20 mil or thicker. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

### **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

**G. Ancillary Facilities:**

None are anticipated.

**H. Well Site Layout (see Well Pad Design Summary):**

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

**I. Plans for Reclamation of the Surface:**

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

**Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

**Final Reclamation**

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

**Seeding and Measures Common to Interim and Final Reclamation**

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

**J. Surface/Mineral Ownership:**

SITLA  
675 East 500 South, Suite 500  
Salt Lake City, UT 84102

**L. Other Information:**

None

NBU 1022-12A1BS/ 1022-12A1CS/  
1022-12A4BS/ 1022-12A4CS

Surface Use Plan of Operations  
8 of 8

**M. Lessee's or Operators' Representative & Certification:**

Gina T. Becker  
Regulatory Analyst II  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6086

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.



Gina T. Becker

September 7, 2011

Date



Joseph D. Johnson  
1099 18TH STREET STE. 1800 • DENVER, CO  
80202  
720-929-6708 • FAX 720-929-7708  
E-MAIL: JOE.JOHNSON@ANADARKO.COM

September 7, 2011

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 1022-12A1BS  
10S-22E-Sec. 12  
NENE/NENE  
Surface: 598' FNL, 621' FEL  
Bottom Hole: 81' FNL, 481' FEL  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 1022-12A1BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

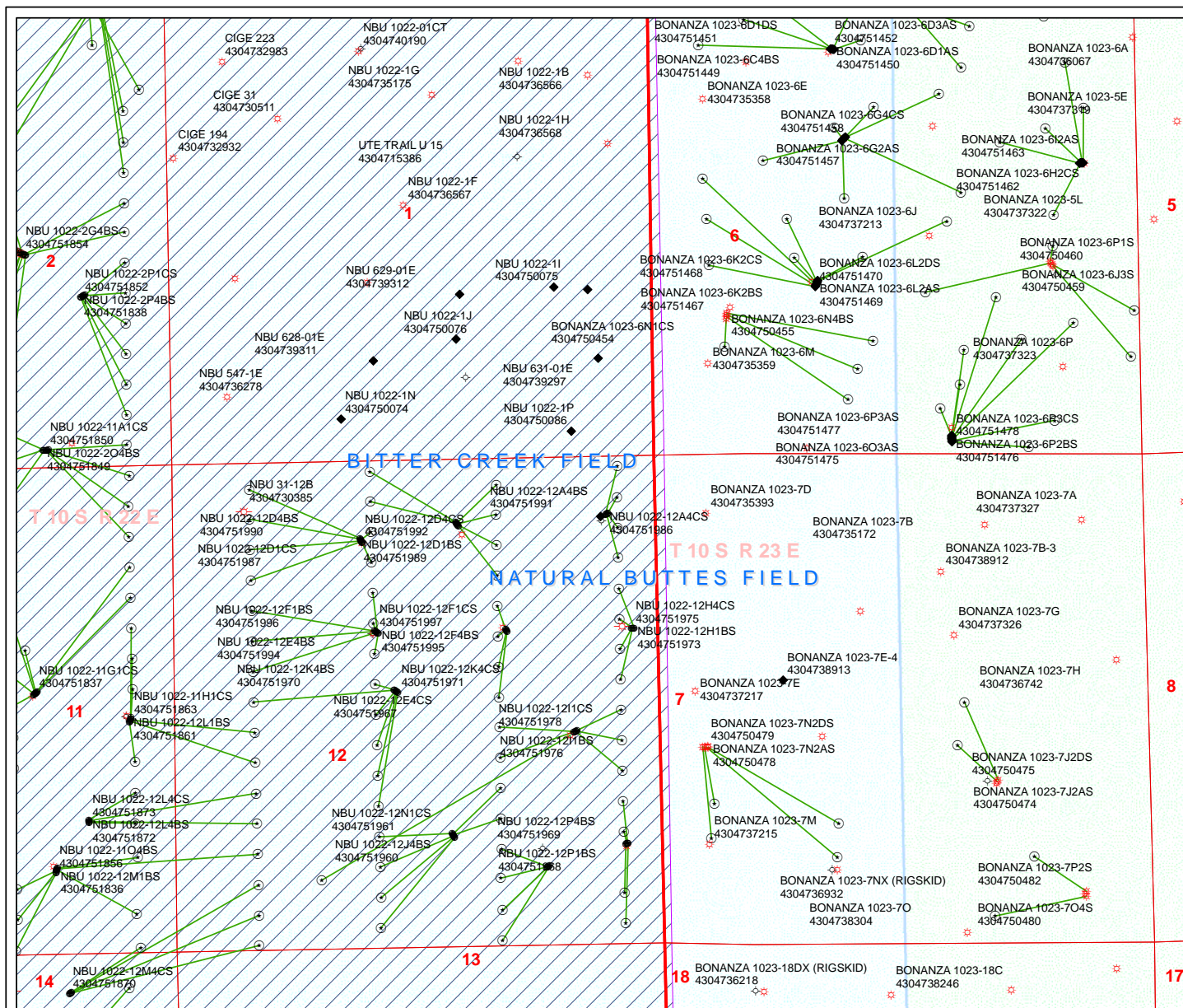
Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'JDJ', with a horizontal line underneath.

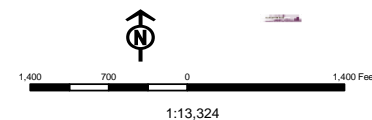
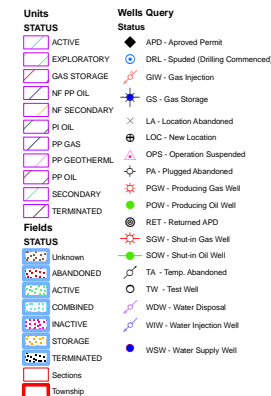
Joseph D. Johnson  
Landman

**RECEIVED: September 09, 2011**



**API Number: 4304751951**  
**Well Name: NBU 1022-12A1BS**  
**Township T10. Range R2.2. Section 12**  
**Meridian: SLBM**  
**Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.**

Map Prepared:  
Map Produced by Diana Mason



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

September 19, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2011 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

**NBU 1022-12H PAD**

43-047-51941	NBU 1022-12H4BS	Sec 12 T10S R22E 1846 FNL 0361 FEL
	BHL	Sec 12 T10S R22E 2071 FNL 0491 FEL

43-047-51942	NBU 1022-12H1CS	Sec 12 T10S R22E 1843 FNL 0341 FEL
	BHL	Sec 12 T10S R22E 1740 FNL 0491 FEL

43-047-51973	NBU 1022-12H1BS	Sec 12 T10S R22E 1842 FNL 0331 FEL
	BHL	Sec 12 T10S R22E 1408 FNL 0491 FEL

43-047-51975	NBU 1022-12H4CS	Sec 12 T10S R22E 1845 FNL 0351 FEL
	BHL	Sec 12 T10S R22E 2402 FNL 0492 FEL

**NBU 1022-12O PAD**

43-047-51943	NBU 1022-12N4BS	Sec 12 T10S R22E 1224 FSL 2329 FEL
	BHL	Sec 12 T10S R22E 0580 FSL 2150 FWL

43-047-51945	NBU 1022-12N4CS	Sec 12 T10S R22E 1216 FSL 2323 FEL
	BHL	Sec 12 T10S R22E 0251 FSL 2141 FWL

43-047-51956	NBU 1022-12J4CS	Sec 12 T10S R22E 1240 FSL 2341 FEL
	BHL	Sec 12 T10S R22E 1409 FSL 1817 FEL

43-047-51959	NBU 1022-12N1BS	Sec 12 T10S R22E 1257 FSL 2352 FEL
	BHL	Sec 12 T10S R22E 1242 FSL 2147 FWL

43-047-51960	NBU 1022-12J4BS	Sec 12 T10S R22E 1249 FSL 2346 FEL
	BHL	Sec 12 T10S R22E 1740 FSL 1816 FEL

**RECEIVED: September 20, 2011**

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51961	NBU 1022-12N1CS	Sec 12 T10S R22E 1232 FSL 2335 FEL
	BHL	Sec 12 T10S R22E 0911 FSL 2149 FWL
<b>NBU 1022-12B PAD</b>		
43-047-51944	NBU 1022-12B1BS	Sec 12 T10S R22E 0668 FNL 2232 FEL
	BHL	Sec 12 T10S R22E 0259 FNL 1797 FEL
43-047-51979	NBU 1022-12C1BS	Sec 12 T10S R22E 0651 FNL 2244 FEL
	BHL	Sec 12 T10S R22E 0089 FNL 2138 FWL
43-047-51980	NBU 1022-12B1CS	Sec 12 T10S R22E 0676 FNL 2227 FEL
	BHL	Sec 12 T10S R22E 0579 FNL 1806 FEL
43-047-51981	NBU 1022-12C1CS	Sec 12 T10S R22E 0660 FNL 2238 FEL
	BHL	Sec 12 T10S R22E 0414 FNL 2133 FWL
43-047-51982	NBU 1022-12B4BS	Sec 12 T10S R22E 0684 FNL 2221 FEL
	BHL	Sec 12 T10S R22E 0910 FNL 1807 FEL
43-047-51983	NBU 1022-12B4CS	Sec 12 T10S R22E 0692 FNL 2215 FEL
	BHL	Sec 12 T10S R22E 1241 FNL 1808 FEL
<b>NBU 1022-12P PAD</b>		
43-047-51947	NBU 1022-12P4CS	Sec 12 T10S R22E 1115 FSL 0442 FEL
	BHL	Sec 12 T10S R22E 0246 FSL 0491 FEL
43-047-51962	NBU 1022-12I4CS	Sec 12 T10S R22E 1112 FSL 0451 FEL
	BHL	Sec 12 T10S R22E 1574 FSL 0493 FEL
43-047-51968	NBU 1022-12P1BS	Sec 12 T10S R22E 1109 FSL 0461 FEL
	BHL	Sec 12 T10S R22E 1240 FSL 0489 FEL
43-047-51969	NBU 1022-12P4BS	Sec 12 T10S R22E 1105 FSL 0470 FEL
	BHL	Sec 12 T10S R22E 0580 FSL 0494 FEL
<b>NBU 1022-12P2 PAD</b>		
43-047-51949	NBU 1022-12O1BS	Sec 12 T10S R22E 0877 FSL 1322 FEL
	BHL	Sec 12 T10S R22E 1077 FSL 1818 FEL
43-047-51950	NBU 1022-12O1CS	Sec 12 T10S R22E 0873 FSL 1331 FEL
	BHL	Sec 12 T10S R22E 0761 FSL 1834 FEL
43-047-51953	NBU 1022-12O4BS	Sec 12 T10S R22E 0881 FSL 1313 FEL
	BHL	Sec 12 T10S R22E 0415 FSL 1820 FEL
43-047-51954	NBU 1022-12O4CS	Sec 12 T10S R22E 0885 FSL 1304 FEL
	BHL	Sec 12 T10S R22E 0082 FSL 1828 FEL
<b>NBU 1022-12A PAD</b>		
43-047-51951	NBU 1022-12A1BS	Sec 12 T10S R22E 0598 FNL 0621 FEL
	BHL	Sec 12 T10S R22E 0081 FNL 0481 FEL
43-047-51952	NBU 1022-12A1CS	Sec 12 T10S R22E 0591 FNL 0592 FEL
	BHL	Sec 12 T10S R22E 0414 FNL 0490 FEL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51986	NBU 1022-12A4CS	Sec 12 T10S R22E 0596 FNL 0611 FEL
	BHL	Sec 12 T10S R22E 1077 FNL 0491 FEL
43-047-51991	NBU 1022-12A4BS	Sec 12 T10S R22E 0593 FNL 0601 FEL
	BHL	Sec 12 T10S R22E 0746 FNL 0490 FEL
<b>NBU 1022-12I PAD</b>		
43-047-51955	NBU 1022-12J1CS	Sec 12 T10S R22E 2333 FSL 1011 FEL
	BHL	Sec 12 T10S R22E 2071 FSL 1815 FEL
43-047-51957	NBU 1022-12J1BS	Sec 12 T10S R22E 2337 FSL 1002 FEL
	BHL	Sec 12 T10S R22E 2402 FSL 1814 FEL
43-047-51958	NBU 1022-12I4BS	Sec 12 T10S R22E 2341 FSL 0993 FEL
	BHL	Sec 12 T10S R22E 1905 FSL 0493 FEL
43-047-51976	NBU 1022-12I1BS	Sec 12 T10S R22E 2350 FSL 0974 FEL
	BHL	Sec 12 T10S R22E 2568 FSL 0492 FEL
43-047-51978	NBU 1022-12I1CS	Sec 12 T10S R22E 2345 FSL 0984 FEL
	BHL	Sec 12 T10S R22E 2237 FSL 0492 FEL
<b>NBU 1022-12G PAD</b>		
43-047-51963	NBU 1022-12G1CS	Sec 12 T10S R22E 1833 FNL 1721 FEL
	BHL	Sec 12 T10S R22E 1904 FNL 1810 FEL
43-047-51972	NBU 1022-12G4BS	Sec 12 T10S R22E 1841 FNL 1715 FEL
	BHL	Sec 12 T10S R22E 2235 FNL 1812 FEL
43-047-51974	NBU 1022-12G1BS	Sec 12 T10S R22E 1826 FNL 1727 FEL
	BHL	Sec 12 T10S R22E 1572 FNL 1809 FEL
43-047-51977	NBU 1022-12G4CS	Sec 12 T10S R22E 1849 FNL 1709 FEL
	BHL	Sec 12 T10S R22E 2566 FNL 1813 FEL
<b>NBU 1022-12F4 PAD</b>		
43-047-51964	NBU 1022-12F4CS	Sec 12 T10S R22E 2462 FNL 2342 FWL
	BHL	Sec 12 T10S R22E 2401 FNL 2141 FWL
43-047-51965	NBU 1022-12K1BS	Sec 12 T10S R22E 2473 FNL 2359 FWL
	BHL	Sec 12 T10S R22E 2567 FSL 2142 FWL
43-047-51966	NBU 1022-12K1CS	Sec 12 T10S R22E 2479 FNL 2367 FWL
	BHL	Sec 12 T10S R22E 2236 FSL 2144 FWL
43-047-51967	NBU 1022-12E4CS	Sec 12 T10S R22E 2467 FNL 2350 FWL
	BHL	Sec 12 T10S R22E 2565 FNL 0822 FWL
43-047-51970	NBU 1022-12K4BS	Sec 12 T10S R22E 2484 FNL 2375 FWL
	BHL	Sec 12 T10S R22E 1904 FSL 2145 FWL
43-047-51971	NBU 1022-12K4CS	Sec 12 T10S R22E 2490 FNL 2384 FWL
	BHL	Sec 12 T10S R22E 1573 FSL 2146 FWL

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

**NBU 1022-12CPAD**

43-047-51984	NBU 1022-12C4BS	Sec 12 T10S R22E 0827 FNL 2020 FWL
	BHL	Sec 12 T10S R22E 0745 FNL 2134 FWL

43-047-51985	NBU 1022-12C4CS	Sec 12 T10S R22E 0855 FNL 2031 FWL
	BHL	Sec 12 T10S R22E 1076 FNL 2135 FWL

43-047-51987	NBU 1022-12D1CS	Sec 12 T10S R22E 0818 FNL 2016 FWL
	BHL	Sec 12 T10S R22E 0579 FNL 0819 FWL

43-047-51989	NBU 1022-12D1BS	Sec 12 T10S R22E 0809 FNL 2013 FWL
	BHL	Sec 12 T10S R22E 0260 FNL 0823 FWL

43-047-51990	NBU 1022-12D4BS	Sec 12 T10S R22E 0837 FNL 2024 FWL
	BHL	Sec 12 T10S R22E 0910 FNL 0819 FWL

43-047-51992	NBU 1022-12D4CS	Sec 12 T10S R22E 0846 FNL 2027 FWL
	BHL	Sec 12 T10S R22E 1241 FNL 0820 FWL

**NBU 1022-12FPAD**

43-047-51988	NBU 1022-12E1BS	Sec 12 T10S R22E 1818 FNL 2146 FWL
	BHL	Sec 12 T10S R22E 1572 FNL 0820 FWL

43-047-51993	NBU 1022-12E1CS	Sec 12 T10S R22E 1824 FNL 2154 FWL
	BHL	Sec 12 T10S R22E 1903 FNL 0821 FWL

43-047-51994	NBU 1022-12E4BS	Sec 12 T10S R22E 1835 FNL 2170 FWL
	BHL	Sec 12 T10S R22E 2234 FNL 0821 FWL

43-047-51995	NBU 1022-12F4BS	Sec 12 T10S R22E 1847 FNL 2187 FWL
	BHL	Sec 12 T10S R22E 2070 FNL 2140 FWL

43-047-51996	NBU 1022-12F1BS	Sec 12 T10S R22E 1841 FNL 2179 FWL
	BHL	Sec 12 T10S R22E 1407 FNL 2137 FWL

43-047-51997	NBU 1022-12F1CS	Sec 12 T10S R22E 1830 FNL 2162 FWL
	BHL	Sec 12 T10S R22E 1739 FNL 2138 FWL

**Michael L. Coulthard**

Digitally signed by Michael L. Coulthard  
 DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals,  
 email=Michael\_Coulthard@blm.gov, c=US  
 Date: 2011.09.19 14:47:24 -0600

bcc: File - Natural Buttes Unit

**Division of Oil Gas and Mining**

Central Files

Agr. Sec. Chron

Fluid Chron

MCoulthard:mc:9-19-11

**RECEIVED: September 20, 2011**

**From:** Diana Mason  
**To:**  
**Subject:** Fwd: Kerr McGee APD approvals

The following APDs have been approved by SITLA including arch and paleo clearance.

NBU 1022-12A1BS ( 4304751951)  
NBU 1022-12A1CS ( 4304751952)  
NBU 1022-12A4CS ( 4304751986)  
)NBU 1022-12A4BS ( 4304751991)  
NBU 1022-12J1CS ( 4304751955)  
NBU 1022-12J1BS ( 4304751957)  
NBU 1022-12I4BS ( 4304751958)  
NBU 1022-12I1BS ( 4304751976)  
NBU 1022-12I1CS ( 4304751978)  
NBU 1022-12B1BS ( 4304751944)  
)NBU 1022-12C1BS ( 4304751979)  
NBU 1022-12B1CS ( 4304751980)  
)NBU 1022-12C1CS ( 4304751981)  
NBU 1022-12B4BS ( 4304751982)  
NBU 1022-12B4CS ( 4304751983)  
)NBU 1022-12H4BS ( 4304751941)  
NBU 1022-12H1CS ( 4304751942)  
NBU 1022-12H1BS ( 4304751973)  
NBU 1022-12H4CS ( 4304751975)  
NBU 1022-12F4CS ( 4304751964)  
NBU 1022-12K1BS ( 4304751965)  
NBU 1022-12K1CS ( 4304751966)  
NBU 1022-12E4CS ( 4304751967)  
NBU 1022-12K4BS ( 4304751970)  
NBU 1022-12K4CS ( 4304751971)  
NBU 1022-12O1BS ( 4304751949)  
NBU 1022-12O1CS ( 4304751950)  
NBU 1022-12O4BS ( 4304751953)  
NBU 1022-12O4CS ( 4304751954)  
NBU 1022-12P4CS ( 4304751947)  
NBU 1022-12I4CS ( 4304751962)  
NBU 1022-12P1BS ( 4304751968)  
NBU 1022-12P4BS ( 4304751969)  
NBU 1022-12G1CS ( 4304751963)  
NBU 1022-12G4BS ( 4304751972)  
NBU 1022-12G1BS ( 4304751974)  
NBU 1022-12G4CS ( 4304751977)  
NBU 1022-12N4BS ( 4304751943)  
NBU 1022-12N4CS ( 4304751945)  
NBU 1022-12J4CS ( 4304751956)  
NBU 1022-12N1BS ( 4304751959)  
NBU 1022-12J4BS ( 4304751960)  
NBU 1022-12N1CS ( 4304751961)

-Jim Davis

**RECEIVED: November 08, 2011**

Jim Davis  
Utah Trust Lands Administration  
[jimdavis1@utah.gov](mailto:jimdavis1@utah.gov)  
Phone: (801) 538-5156

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 1022-12A1B			
String	Surf	Prod		
Casing Size(in)	8.625	4.500		
Setting Depth (TVD)	2155	8470		
Previous Shoe Setting Depth (TVD)	40	2155		
Max Mud Weight (ppg)	8.4	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5421	12.3		

Calculations	Surf String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	941		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	682	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	467	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	476	NO	Reasonable for area
Required Casing/BOPE Test Pressure=		2155	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient	

Calculations	Prod String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	5506		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4490	YES	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3643	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4117	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2155	psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	

API Well Number: 43047519510000

\*Max Pressure Allowed @ Previous Casing Shoe=

psi \*Assumes 1psi/ft frac gradient

**RECEIVED:** November 21, 2011

# 43047519510000 NBU 1022-12A1BS

## Casing Schematic

Surface

✓ stip surf cmt.

8-5/8"  
MW 8.3  
Frac 19.3

4-1/2"  
MW 12.5

TOC @  
780.

Surface  
2200. MD  
2155. TVD

3658' tail  
3770' ± BMSW  
4141' Wasatch

6296' Mesaverde

7260 MV U2

7829 MV L1

Production  
8530. MD  
8470. TVD

598 NL  
515  
83 FNL

621 EL  
141

480 FEL ✓ OK

NENE SEC 12-10S-22E

Clinta

to surf @ 82' w/o tail 3181'  
proposed to surf.

to 164' @ 0% w/o tail 978'

TOC @ 1124' Green River

1401 Birds Nest

\*stip ✓

1754' Mahogany

Well name:	<b>43047519510000 NBU 1022-12A1BS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Surface	Project ID: 43-047-51951
Location:	UINTAH COUNTY	

**Design parameters:****Collapse**

Mud weight: 8.330 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 104 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 1,092 ft

**Burst**

Max anticipated surface pressure: 1,936 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,195 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.70 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 1,927 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 385 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 14.5 °

**Re subsequent strings:**

Next setting depth: 8,530 ft  
Next mud weight: 12.500 ppg  
Next setting BHP: 5,539 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,200 ft  
Injection pressure: 2,200 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2200	8.625	28.00	I-55	LT&C	2155	2200	7.892	87116
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	932	1880	2.016	2195	3390	1.54	60.3	348	5.77 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: November 2, 2011  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2155 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>43047519510000 NBU 1022-12A1BS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Production	Project ID:	43-047-51951
Location:	UINTAH COUNTY		

**Design parameters:****Collapse**

Mud weight: 12.500 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 193 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 780 ft

**Burst**

Max anticipated surface pressure: 3,637 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 5,500 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on air weight.

Neutral point: 6,947 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 534 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8530	4.5	11.60	I-80	LT&C	8470	8530	3.875	112596
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5500	6360	1.156	5500	7780	1.41	98.3	212	2.16 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: November 2, 2011  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 8470 ft, a mud weight of 12.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

# **ON-SITE PREDRILL EVALUATION**

## **Utah Division of Oil, Gas and Mining**

<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
<b>Well Name</b>	NBU 1022-12A1BS				
<b>API Number</b>	43047519510000	<b>APD No</b>	4557	<b>Field/Unit</b>	NATURAL BUTTES
<b>Location: 1/4,1/4</b>	NENE	<b>Sec</b>	12	<b>Tw</b>	10.0S
		<b>Rng</b>	22.0E	598	FNL 621 FEL
<b>GPS Coord (UTM)</b>	638327 4425370	<b>Surface Owner</b>			

### **Participants**

Andy Lytle, Sheila Wopsock, Charles Chase, Grizz Oleen, Jaime Scharnowski, Doyle Holmes, (Kerr McGee). John Slauch, Mitch Batty, (Timberline). Jim Davis (SITLA). Ben Williams (DWR). David Hackford, (DOGM).

### **Regional/Local Setting & Topography**

The general area is in the southeast portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is 4200'. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 47.3 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads. Three wells, in addition to this one will be directionally drilled from this pad. (For a total of four new wells). There is one existing well on this pad, and it has been PA'd. It is the NBU 634-12E. This proposed location takes in an existing location, and very little new construction will be necessary except for digging the reserve pit. The existing access road will be re-routed for 650 feet. The location runs in an east-west direction in a relatively flat area approximately 1500' east of the beginning of the rugged breaks that lead to the White River. Kerr McGee's South Compressor complex is 600' to the west. New construction will consist of approximately 50 feet on all sides of the existing pad, and an additional 50 feet on the south side for reserve pit and excess cut stockpile. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and should be a suitable location for five wells, and is on the best site available in the immediate area.

### **Surface Use Plan**

#### **Current Surface Use**

Grazing  
Wildlife Habitat  
Existing Well Pad

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0.125	<b>Width 352 Length 425</b>	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?** Y

### **Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass, annuals and curly Vegetation is a salt desert shrub type. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, coyote, raptors, small mammals and birds.

#### Soil Type and Characteristics

Rocky sandy clay loam.

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y Paleo Potential Observed? N Cultural Survey Run? Y Cultural Resources? N

#### Reserve Pit

##### Site-Specific Factors

##### Site Ranking

<b>Distance to Groundwater (feet)</b>	100 to 200	5
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>		20
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>	40	1 Sensitivity Level

##### Characteristics / Requirements

The reserve pit is planned in an area of cut on the south side of the location. Dimensions are 120' x 260' x 12' deep with two feet of freeboard. Kerr McGee agreed to line this pit with a 16 mil synthetic liner and a layer of felt sub-liner.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 16 Pit Underlayment Required? Y

#### Other Observations / Comments

David Hackford  
Evaluator

10/12/2011  
Date / Time

# Application for Permit to Drill Statement of Basis

11/22/2011

Utah Division of Oil, Gas and Mining

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<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
4557	43047519510000	SITLA	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 1022-12A1BS		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	NENE 12 10S 22E S 598 FNL 621 FEL GPS Coord (UTM) 638250E 4425579N				

## Geologic Statement of Basis

Kerr McGee proposes to set 2,200' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,770'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 12. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill  
**APD Evaluator**

10/19/2011  
**Date / Time**

## Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is 4200 feet. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 47 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads. The existing access road will be re-routed for the final 650 feet.

Four wells will be directionally drilled from this location. They are the NBU 1022-12A1CS, NBU 1022-12A1BS, NBU 1022-12A4BS and the NBU 1022-12A4CS. The existing location has one well. This well is the NBU 634-12E, and it has been PA'd. Kerr McGee's South Compressor complex is 600 feet to the west. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and sufficient for five wells, and is the best site for a location in the immediate area.

New construction will consist of approx. 50 feet on all sides of the existing pad, and an additional 50 feet on the south side for reserve pit and excess cut stockpile.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Ben Williams with DWR were invited by email to the pre-site evaluation. Both were present. Kerr McGee personnel were told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford  
**Onsite Evaluator**

10/12/2011  
**Date / Time**

## Conditions of Approval / Application for Permit to Drill

<b>Category</b>	<b>Condition</b>
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the south side of the location.

**RECEIVED: November 22, 2011**

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**Application for Permit to Drill  
Statement of Basis**

11/22/2011

**Utah Division of Oil, Gas and Mining**

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**RECEIVED: November 22, 2011**

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 9/9/2011**API NO. ASSIGNED:** 43047519510000**WELL NAME:** NBU 1022-12A1BS**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)**PHONE NUMBER:** 720 929-6086**CONTACT:** Gina Becker**PROPOSED LOCATION:** NENE 12 100S 220E**Permit Tech Review:** ☒**SURFACE:** 0598 FNL 0621 FEL**Engineering Review:** ☒**BOTTOM:** 0081 FNL 0481 FEL**Geology Review:** ☒**COUNTY:** UINTAH**LATITUDE:** 39.96907**LONGITUDE:** -109.38115**UTM SURF EASTINGS:** 638250.00**NORTHINGS:** 4425579.00**FIELD NAME:** NATURAL BUTTES**LEASE TYPE:** 3 - State**LEASE NUMBER:** UT ST UO 01997-A ST**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE**SURFACE OWNER:** 3 - State**COALBED METHANE:** NO**RECEIVED AND/OR REVIEWED:**☒ **PLAT**☒ **Bond:** STATE/FEE - 22013542☐ **Potash**☒ **Oil Shale 190-5**☐ **Oil Shale 190-3**☐ **Oil Shale 190-13**☒ **Water Permit:** 43-8496☐ **RDCC Review:**☐ **Fee Surface Agreement**☒ **Intent to Commingle****Commingle Approved****LOCATION AND SITING:**☐ **R649-2-3.****Unit:** NATURAL BUTTES☐ **R649-3-2. General**☐ **R649-3-3. Exception**☒ **Drilling Unit****Board Cause No:** Cause 173-14**Effective Date:** 12/2/1999**Siting:** Suspends General Siting☒ **R649-3-11. Directional Drill****Comments:** Presite Completed

**Stipulations:** 3 - Commingle - ddoucet  
5 - Statement of Basis - bhill  
15 - Directional - dmason  
17 - Oil Shale 190-5(b) - dmason  
25 - Surface Casing - hmadonald

**RECEIVED: November 22, 2011**



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 1022-12A1BS

**API Well Number:** 43047519510000

**Lease Number:** UT ST UO 01997-A ST

**Surface Owner:** STATE

**Approval Date:** 11/22/2011

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

**Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels  
OR  
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

**Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01997-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/29/2012	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/ 28 SX READY MIX. SPUD WELL LOCATION ON MARCH 29, 2012 AT 11:00 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> April 03, 2012		
<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/2/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01997-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 3/29/2012	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/ 28 SX READY MIX. SPUD WELL LOCATION ON MARCH 29, 2012 AT 11:00 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> April 03, 2012		
<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/2/2012	

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
Submitted By J. Scharnowske Phone Number 720.929.6304  
Well Name/Number NBU 1022-12A1BS  
Qtr/Qtr NENE Section 12 Township 10S Range 22E  
Lease Serial Number UT-ST-UO-01997-A ST  
API Number 4304751951

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 03/28/2012 14:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing  
☐ Intermediate Casing  
☐ Production Casing  
☐ Liner  
☐ Other

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**MAR 28 2012**

DIV. OF OIL, GAS & MINING

Date/Time 04/11/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point  
☐ BOPE test at intermediate casing point  
☐ 30 day BOPE test  
☐ Other

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6156

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751951	NBU 1022-12A1BS		NENE	12	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	3/29/2012			<u>4/24/2012</u>	
<b>Comments:</b> MIRU BUCKET RIG. SPUD WELL LOCATION ON 03/29/2012 AT 11:00 HRS. <u>WSMVP BHL nene</u>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750762	NBU 1022-9M1DS		SESW	9	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	3/29/2012			<u>4/24/2012</u>	
<b>Comments:</b> MIRU BUCKET RIG. SPUD WELL LOCATION ON 03/29/2012 AT 12:30 HRS. <u>WSMVD BHL SWSW</u>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750761	NBU 1022-9M1AS		SESW	9	10S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	3/29/2012			<u>4/24/2012</u>	
<b>Comments:</b> MIRU BUCKET RIG. SPUD WELL LOCATION ON 03/29/2012 AT 17:30 HRS. <u>WSMVD BHL SWSW</u>							

**ACTION CODES:**

- A** - Establish new entity for new well (single well only)
- B** - Add new well to existing entity (group or unit well)
- C** - Re-assign well from one existing entity to another existing entity
- D** - Re-assign well from one existing entity to a new entity
- E** - Other (Explain in 'comments' section)

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**APR 03 2012**

**DANI PIERNOT**

Name (Please Print)

Dani Piernot

Signature

REGULATORY ANALYST

Title

4/2/2012

Date

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:

UT ST UO 01197-A ST

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

UTU63047A

1. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER \_\_\_\_\_

8. WELL NAME and NUMBER:

Multiple Well Locations

9. API NUMBER:

2. NAME OF OPERATOR:

Kerr-McGee Oil & Gas Onshore, L.P.

3. ADDRESS OF OPERATOR:

P.O. Box 173779

Denver

CO

80217

PHONE NUMBER:

(720) 929-6086

10. FIELD AND POOL, OR WILDCAT

Natural Buttes

4. LOCATION OF WELL

FOOTAGES AT SURFACE: Various Locations in T10S-R22E, Section 12

COUNTY: Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

12 10S 22E 6

STATE:

UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>4/23/2012</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Lease Number</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<u>Correction</u>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Kerr-McGee is requesting approval to correct the lease number from UT ST UO 01997-A ST to UT ST UO 01197-A ST for various well locations. Please see attached well list.

Thank you!

NAME (PLEASE PRINT) Gina T Becker

TITLE Senior Regulatory Analyst

SIGNATURE Gina T Becker

DATE 4/23/2012

(This space for State use only)

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APR 24 2012

	API UWI NO	WELL NAME	SL STATE	SL SECTION	SL TOWNSHIP	SL RANGE	SL COUNTY NAME	GOV LEASE NO	FEDERAL LEASE NO
1	4304751951	NBU 1022-12A1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
2	4304751952	NBU 1022-12A1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
3	4304751991	NBU 1022-12A4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
4	4304751986	NBU 1022-12A4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
5	4304751944	NBU 1022-12B1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
6	4304751980	NBU 1022-12B1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
7	4304751982	NBU 1022-12B4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
8	4304751983	NBU 1022-12B4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
9	4304751979	NBU 1022-12C1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
10	4304751981	NBU 1022-12C1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
11	4304751984	NBU 1022-12C4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
12	4304751985	NBU 1022-12C4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
13	4304751989	NBU 1022-12D1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
14	4304751987	NBU 1022-12D1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
15	4304751990	NBU 1022-12D4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
16	4304751992	NBU 1022-12D4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
17	4304751988	NBU 1022-12E1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
18	4304751993	NBU 1022-12E1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
19	4304751994	NBU 1022-12E4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
20	4304751996	NBU 1022-12F1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
21	4304751997	NBU 1022-12F1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
22	4304751995	NBU 1022-12F4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
23	4304751967	NBU 1022-12E4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
24	4304751964	NBU 1022-12F4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
25	4304751965	NBU 1022-12K1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
26	4304751966	NBU 1022-12K1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
27	4304751970	NBU 1022-12K4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
28	4304751971	NBU 1022-12K4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
29	4304751974	NBU 1022-12G1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
30	4304751963	NBU 1022-12G1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
31	4304751972	NBU 1022-12G4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
32	4304751977	NBU 1022-12G4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
33	4304751973	NBU 1022-12H1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
34	4304751942	NBU 1022-12H1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
35	4304751941	NBU 1022-12H4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
36	4304751975	NBU 1022-12H4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
37	4304751976	NBU 1022-12I1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
38	4304751978	NBU 1022-12I1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
39	4304751958	NBU 1022-12I4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
40	4304751957	NBU 1022-12J1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
41	4304751955	NBU 1022-12J1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
42	4304751960	NBU 1022-12J4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
43	4304751956	NBU 1022-12J4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
44	4304751959	NBU 1022-12N1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
45	4304751961	NBU 1022-12N1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
46	4304751943	NBU 1022-12N4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
47	4304751945	NBU 1022-12N4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
48	4304751962	NBU 1022-12I4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
49	4304751968	NBU 1022-12P1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A

	API UWI NO	WELL NAME	SL STATE	SL SECTION	SL TOWNSHIP	SL RANGE	SL COUNTY NAME	GOV LEASE NO	FEDERAL LEASE NO
50	4304751969	NBU 1022-12P4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
51	4304751947	NBU 1022-12P4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
52	4304751949	NBU 1022-12O1BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
53	4304751950	NBU 1022-12O1CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
54	4304751953	NBU 1022-12O4BS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A
55	4304751954	NBU 1022-12O4CS	UT	12	10	22	UINTAH	UT ST UO 01197-A ST	UTU63047A

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000			
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH			
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA					
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 4/26/2012  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION            OTHER: <input style="width: 100px;" type="text"/> </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. <div style="display: flex; justify-content: space-between;"> <div style="width: 65%;">           THE OPERATOR REQUESTS APPROVAL FOR A FIT WAIVER, A CLOSED LOOP DRILLING OPTION, AND A PRODUCTION CASING CHANGE. ALL OTHER ASPECTS OF THE PREVIOUSLY APPROVED DRILLING PLAN WILL NOT CHANGE. PLEASE SEE THE ATTACHMENT. THANK YOU.         </div> <div style="width: 30%; text-align: right;"> <p style="color: red; font-weight: bold;">Approved by the Utah Division of Oil, Gas and Mining</p> <p style="color: red; font-weight: bold;">Date: May 21, 2012</p> <p style="color: red; font-weight: bold;">By: <u><i>Derek Duff</i></u></p> </div> </div>					
<b>NAME (PLEASE PRINT)</b> Gina Becker		<b>PHONE NUMBER</b> 720 929-6086			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst II			
<b>DATE</b> 4/26/2012					

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 1022-12A1BS**

Surface:	598 FNL / 621 FEL	NENE
BHL:	81 FNL / 481 FEL	NENE

Section 12 T10S R22E

Uintah County, Utah  
Mineral Lease: UT ST UO 01197-A ST

**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,124'	
Birds Nest	1,401'	Water
Mahogany	1,754'	Water
Wasatch	4,141'	Gas
Mesaverde	6,296'	Gas
Sego	8,470'	Gas
TVD	8,470'	
TD	8,530'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

**7. Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 8470' TVD, approximately equals  
5,421 psi (0.64 psi/ft = actual bottomhole gradient)

---

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,546 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

**8. Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

**9. Variances:**

Please refer to the attached Drilling Program.  
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

**Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### **Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### **Variance for Special Drilling Operation (surface equipment placement) Requirements**

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### **Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### **Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

#### **10. Other Information:**

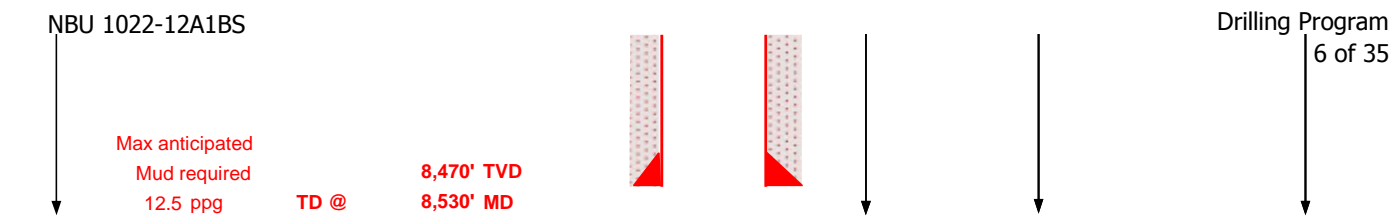
Please refer to the attached Drilling Program.



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	April 26, 2012		
WELL NAME	<b>NBU 1022-12A1BS</b>					TD	8,470'	TVD	8,530' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5170.7
SURFACE LOCATION	NENE	598 FNL	621 FEL	Sec 12	T 10S	R 22E			
	Latitude:	39.969056	Longitude:	-109.380377			NAD 27		
BTM HOLE LOCATION	NENE	81 FNL	481 FEL	Sec 12	T 10S	R 22E			
	Latitude:	39.970471	Longitude:	-109.379874			NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.								

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12-1/4"	8-5/8", 28#, IJ-55, LTC	Air mist
		200'			
			11"	8-5/8", 28#, IJ-55, LTC	Air mist
<p>All water flows encountered while drilling will be reported to the appropriate agencies.</p> <p>Green River @ 1,124'</p> <p>Top of Birds Nest @ 1,401'</p> <p>Mahogany @ 1,754'</p> <p>Preset f/ GL @ 2,200' TVD</p> <p>Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.</p> <p>Wasatch @ 4,141'</p> <p>Mud logging program TBD</p> <p>Cased hole logging program from TD - surf csg</p> <p>7-7/8"</p> <p>4-1/2" 11.6# I-80 Ultra DQX/LTC csg</p> <p>Water / Fresh Water Mud 8.3-12.5 ppg</p> <p>Mverde @ 6,296' TVD</p> <p>Sego @ 8,470' TVD</p>					



NBU 1022-12A1BS

Drilling Program  
7 of 35

## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

							DESIGN FACTORS		
	SIZE	INTERVAL		WT.	GR.	CPLG.	LTC		DQX
							BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'							
							3,390	1,880	348,000
SURFACE	8-5/8"	0	to 2,200	28.00	IJ-55	LTC	2.46	1.83	6.45
							7,780	6,350	223,000
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	1.11	1.15	3.34
							7,780	6,350	223,000
	4-1/2"	5,000	to 8,530'	11.60	I-80	LTC	1.11	1.15	6.73

**Surface Casing:**

(Burst Assumptions: TD = 12.5 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi)

0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	1,700'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	160	35%	11.00	3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
			celloflake + 5 pps gilsonite + 10% gel + 0.5% extender				
	TAIL	4,890'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,160	35%	14.30	1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Chad Loesel

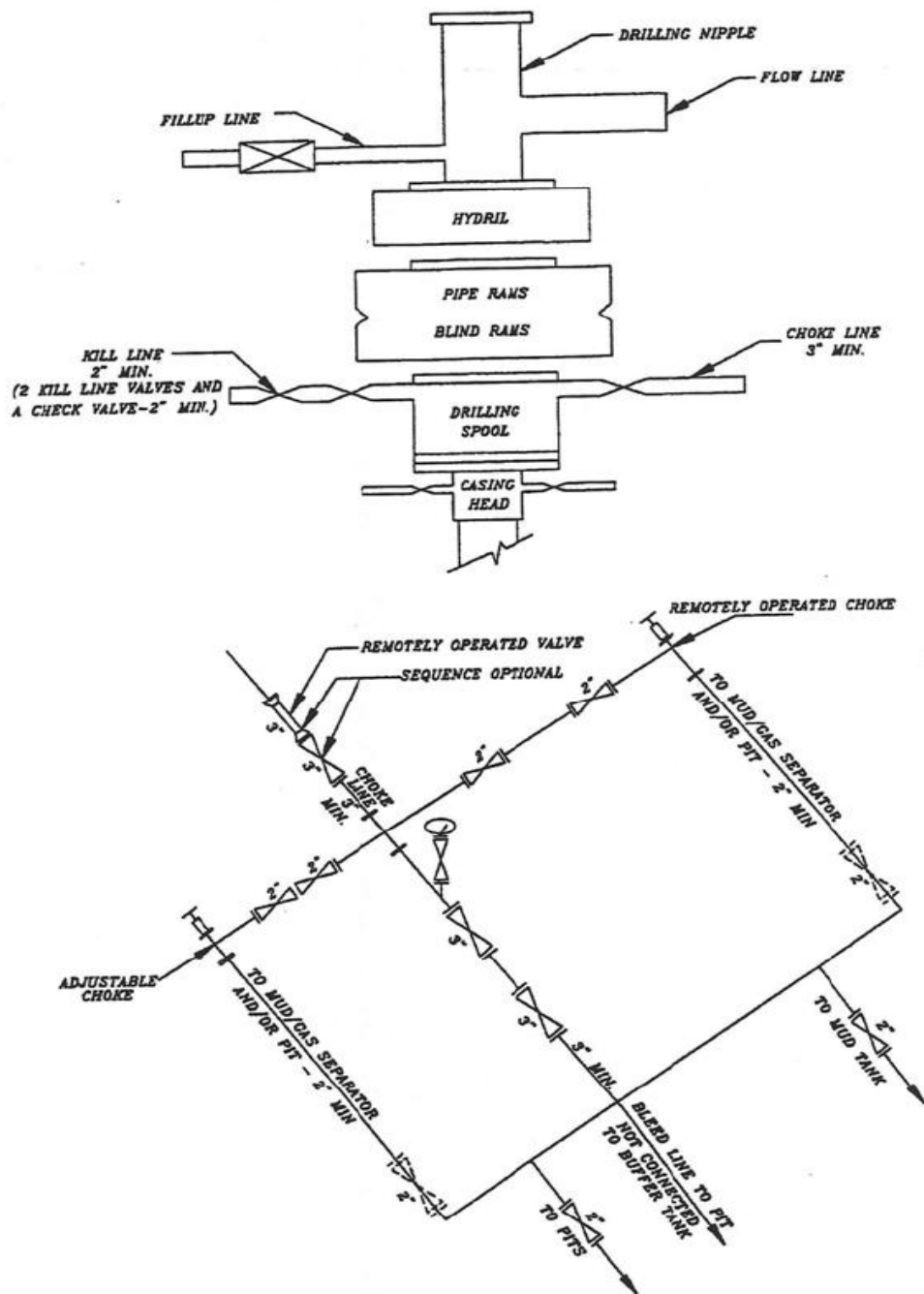
**DATE:****DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

**DATE:**

RECEIVED: Apr. 26, 2012

**EXHIBIT A**  
**NBU 1022-12A1BS**



**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/11/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU AIR RIG ON 4/9/2012. DRILLED SURFACE HOLE TO 2370'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> May 08, 2012		
<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/12/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
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<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
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<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 5/19/2012	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input checked="" type="checkbox"/> OTHER OTHER: ACTS PIT	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU ROTARY RIG. FINISHED DRILLING FROM 2370' TO 8550' ON 5/18/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED PIONEER 54 RIG ON 5/19/2012 @ 18:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> May 21, 2012		
<b>NAME (PLEASE PRINT)</b> Cara Mahler	<b>PHONE NUMBER</b> 720 929-6029	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 5/21/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 5/15/2012  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input checked="" type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION         </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the frac tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. Thank you.		
<b>NAME (PLEASE PRINT)</b> Gina Becker		<b>PHONE NUMBER</b> 720 929-6086
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst II  <b>DATE</b> 5/14/2012

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54  
Submitted By KALIB FORD Phone Number 435-790-2921  
Well Name/Number NBU 1022-12A1BS  
Qtr/Qtr NE NE Section 12 Township 10S Range 22E  
Lease Serial Number UT ST UO 01997-A ST  
API Number 4304751951

Casing – Time casing run starts, not cementing times.

- ☐ Production Casing  
☐ Other

Date/Time \_ \_ AM ☐ PM ☐

RECEIVED

MAY 16 2012

DIV. OF OIL, GAS & MINING

BOPE

- ☒ Initial BOPE test at surface casing point  
☐ Other

Date/Time 5/15/12 9 AM ☐ PM ☒

Rig Move

Location To:

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Remarks \_\_\_\_\_

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/6/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. No activity for the month of June 2012. Well TD at 8,550'.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> July 09, 2012		
<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/6/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000
<b>PHONE NUMBER:</b> 720 929-6511		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/20/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 7/20/2012. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> July 25, 2012		
<b>NAME (PLEASE PRINT)</b> Cara Mahler	<b>PHONE NUMBER</b> 720 929-6029	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/24/2012	

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8  
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UT ST UO 01997-A ST
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME UTU63047A
3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217		8. WELL NAME and NUMBER: NBU 1022-12A1BS <input checked="" type="checkbox"/>
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: NENE 598 FNL 621 FEL S12,T10S,R22E AT TOP PRODUCING INTERVAL REPORTED BELOW: NENE 83 FNL 487 FEL S12,T10S,R22E AT TOTAL DEPTH: NENE 83 FNL 476 FEL S12,T10S,R22E <i>BHL by HSM</i>		9. API NUMBER: 4304751951
10. FIELD AND POOL, OR WILDCAT NATURAL BUTTES		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENE 12 10S 22E S
12. COUNTY UINTAH		13. STATE UTAH

14. DATE SPULDED: 3/29/2012	15. DATE T.D. REACHED: 5/18/2012	16. DATE COMPLETED: 7/20/2012	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 5171 GL
18. TOTAL DEPTH: MD 8,550 TVD 8,490	19. PLUG BACK T.D.: MD 8,489 TVD 8,428-8430	20. IF MULTIPLE COMPLETIONS, HOW MANY? *		21. DEPTH BRIDGE MD PLUG SET: TVD
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) CBL/GR/CCL/TEMP				23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,361		620		0	
7 7/8"	4 1/2" I-80	11.6#	0	8,534		1,426		700	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	7,917							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	6,588	8,373			6,588 8,373	0.36	208	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6588-8373	PUMP 9,633 BBLs SLICK H2O & 220,970 LBS 30/50 OTTAWA SAND
	9 STAGES

29. ENCLOSED ATTACHMENTS:

- ☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☒ DIRECTIONAL SURVEY  
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER: \_\_\_\_\_

30. WELL STATUS:

RECEIVED  
SEP 05 2012

## 31. INITIAL PRODUCTION

## INTERVAL A (As shown in item #26)

ST. INITIAL PRODUCTION										
DATE FIRST PRODUCED: 7/20/2012		TEST DATE: 7/23/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,854	WATER – BBL: 550	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,827	CSG. PRESS. 2,515	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 2,854	WATER – BBL: 550	INTERVAL STATUS: PROD

## INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

## 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,124
				BIRD'S NEST	1,385
				MAHOGANY	1,739
				WASATCH	4,216
				MESAVERDE	6,339

## 35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 5025'; LTC csg was run from 5025' to 8534'. Attached is the chronological well history, perforation report & final survey.

## 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) CARA MAHLER

TITLE REGULATORY ANALYST

SIGNATURE

DATE

8/29/2012

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 3/26/2012

End Date: 5/19/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/9/2012	10:00 - 11:00	1.00	PRPSPD	01	B	P		SAFETY AND RIG INSPECTION
	11:00 - 13:00	2.00	PRPSPD	07	A	P		RIG SERVICE, PRE SPUD JOB SAFETY MEETING, FINISH PICKING UP BHA. PICK UP NOV 1.83 DEGREE BENT MOTOR- .17 REV/GAL SN (775-77428). REINSTALL FLOWLINE AND CONTROL LINES TO FLOOR. PICK UP 12.25 in. BIT (SN 7137066) 32 nd RUN.
	13:00 - 14:00	1.00	DRLSUR	02	D	P		SPUD 04/09/2012 1300 hrs. DRILL 12.25" HOLE 44 ft TO 210 ft (166 FT, 166 FPH). 12.25 in. BIT ON 32 nd RUN. WOB 5-15 Kips. GPM 491. PSI ON/OFF 600/400. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 20/20/20 K. DRAG 0 Kips . CIRCULATE CLOSED LOOP SYSTEM W/ 8.5 ppg WATER. DRILL DOWN TO 210 ft W/6 in COLLARS. CIRC 15 min. AND TRIP OUT TO CHANGE ASSEMBLY.
	14:00 - 14:15	0.25	DRLSUR	05	C	P		
	14:15 - 16:00	1.75	DRLSUR	06	A	P		PRE JOB SAFETY MEETING, LAY DOWN 6 in DRILL COLLARS, 12 1/4 in BIT. MAKE UP Q506F 11in BIT (1st RUN) (SN 7024523) PICK UP 8 in DIRECTIONAL ASSEMBLY. INSTALL EM TOOL. TRIP IN HOLE.
4/10/2012	16:00 - 0:00	8.00	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 210 ft. TO 1120 ft., (910 ft. , 113 FPH). WOB 15-25 Kips. GPM 491. PSI ON/OFF 850/720. SURFACE RPM 55, MOTOR 83, TOTAL RPM 139. UP/DOWN/ ROT 55/44/48 K. DRAG 7 Kips. CIRCULATE CLOSED LOOP PITS WITH 8.6 ppg WATER. NO HOLE ISSUES.
	0:00 - 14:30	14.50	DRLSUR	02	D	P		DRILL 11in. SURFACE HOLE 1120 ft. TO TD AT 2370 ft., (1250 ft. , 86 FPH). WOB 15-25 Kips. GPM 491. PSI ON/OFF 1315/1109. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 83/60/73 K. DRAG 10 Kips. CIRCULATE CLOSED LOOP PITS WITH 8.7 ppg WATER. NO HOLE ISSUES.
	14:30 - 16:30	2.00	CSGSUR	05	C	P		CONDITION WELLBORE FOR CASING RUN
	16:30 - 20:00	3.50	CSGSUR	06	D	P		TRIP OUT OF HOLE, LAY DOWN BOTTOM HOLE ASSEMBLY, DIRECTIONAL TOOLS, MOTOR AND BIT. LAY DOWN DIRECTIONAL TOOLS. CLEAR TOOL AREA.
	20:00 - 20:30	0.50	CSGSUR	06	A	P		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN SURFACE CASING. CLEAR UNRELATED TOOLS.
	20:30 - 22:30	2.00	CSGSUR	12	C	P		RUN 53 JOINTS OF 8-5/8 in. 28# J-55 LTC CASING. LAND FLOAT SHOE @ 2342 ft. KB. LAND BAFFLE PLATE @ 22296 ft. KB. RAN 5 TOTAL CENTRALIZERS.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 3/26/2012

End Date: 5/19/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	22:30 - 0:00	1.50	CSGSUR	12	E	P		RAN 200 ft OF 1 lin. PIPE DOWN BACK-SIDE OF CASING. PRE JOB SAFETY MEETING, PRESSURE TEST LINES TO 1000 PSI. PUMP 130 BBLs OF WATER AHEAD. MIX AND PUMP 20 BBLs OF 8.5# GEL WATER AHEAD. MIX AND PUMP (300 sx) 61.4 BBLs OF 15.8.8# 1.15 YIELD. DROP PLUG ON FLY. DISPLACE W/ 140 BBLs OF H2O. NO RETURNS THROUGH OUT JOB. FINAL LIFT OF 180 PSI AT 3 BBL/MIN. SHUT DOWN HELD 480 PSI FOR 5 MIN. TESTED FLOAT AND FLOAT HELD.
4/11/2012	0:00 - 0:45	0.75	CSGSUR	12	E	P		CEMENT DOWN ONE INCH TREMMIE W/ 150 sx (30.7 bbls.) SAME CEMENT WITHOUT RETURNS TO SURFACE.
	0:45 - 2:30	1.75	CSGSUR	12	E	P		WAIT 1.5 HOURS ON CEMENT, CEMENT DOWN BACKSIDE W/ 125 sx (46 bbls.) SAME CEMENT WITHOUT RETURNS TO SURFACE. TOP OUT WELL 3 . RIG DOWN CEMENTERS. (CEMENT JOB FINISHED AT 0230 hrs. 4/11/2012) RNI (7 hrs) AND PRICE WATER SERVICE (6 hrs) HYDROVACED THE PITS.
	2:30 - 4:00	1.50	RDMO	01	A	P		CONTINUE RIGGING DOWN, PREPARE TO MOVE RIG, RELEASE RIG AT 0400 hrs. 4-11-2012
5/15/2012	20:00 - 21:00	1.00	DRLPRC	01	C	P		SKID RIG 10', CENTERD AND LEVEL RIG
	21:00 - 22:00	1.00	DRLPRC	14	A	P		NIPPLE UP BOPE, CHOKE LINE AND FLOW LINE
	22:00 - 0:00	2.00	DRLPRC	15	A	P		RIG UP B&C QUICK TEST, SAFETY MEETING, TESTING BOPE
5/16/2012	0:00 - 2:30	2.50	DRLPRV	15	A	P		TEST BOPE, ALL VALVES & RAMS 250 LOW 5000 HIGH, ANN 2500, SURFACE CASING 1500 FOR 30 MIN
	2:30 - 3:00	0.50	DRLPRV	14	B	P		INSTALL WEAR BUSHING
	3:00 - 6:00	3.00	DRLPRV	06	A	P		PICK UP BIT AND MOTOR, INSTALLED DIRECTIONAL TOOLS, TRIPPED IN THE HOLE, TAGGED CEMENT @2230'
	6:00 - 7:30	1.50	DRLPRV	09	A	P		SLIP AND CUT 100' OF DRILL LINE, CHANGED OUT SAVOR SUB
	7:30 - 9:30	2.00	DRLPRV	02	F	P		DRILL CEMENT, FLOAT, SHOE & OPEN HOLE TO 2385'
	9:30 - 16:30	7.00	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 2385' TO 3891', 1506' @215' PH WOB / 20-22 RPM TOP DRIVE 50- 60, MOTOR-135 SPM 200 = GPM 586 MW 8.5 VIS 28 PUMPING 10 BBLs 80 VIS SWEEP WITH 5% LCM TO HELP LOSS TRQ ON/OFF = 4-7 K PSI ON /OFF 1900-1600 , DIFF 100-400 PU/SO/RT = 110-100-90 K, 10K DRAG SLIDE = 51' IN 0.58 HRS = 88' PH ROT = 1455' IN 6.42 HRS = 226' PH NOV- ON LINE 2- DEWATERING 26'N & 27'W OF TARGET CENTER 0 DRILL FLARE, 0 CONN FLARE HOLE IN GOOD CONDITION
	16:30 - 17:00	0.50	DRLPRV	07	A	P		RIG SERVICE, FUNCTION HCR AND ANNULAR, BOP DRILL 70 SEC.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 3/26/2012

End Date: 5/19/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:00 - 0:00	7.00	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 3891' TO 5124', 1233' @176' PH WOB / 20-22 RPM TOP DRIVE 50- 60, MOTOR-135 SPM 200 = GPM 586 MW 8.5 VIS 28 PUMPING 10 BBLS 80 VIS SWEEP WITH 5% LCM TO HELP LOSS TRQ ON/OFF = 4-7 K PSI ON /OFF 1900-1600 , DIFF 100-400 PU/SO/RT = 110-100-90 K, 10K DRAG SLIDE = 104' IN 1.44 HRS = 73' PH ROT = 1129' IN 5.56 HRS = 203' PH NOV- ON LINE 2- DEWATERING 1.37 N' & 6' W OF TARGET CENTER 0 DRILL FLARE, 0 CONN FLARE HOLE IN GOOD CONDITION
5/17/2012	0:00 - 16:00	16.00	DRLPRC	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 5124' TO 7306', 2182' @136' PH WOB / 22-23 RPM TOP DRIVE 50- 60, MOTOR-135 SPM 200 = GPM 586 MW 8.5 VIS 28 PUMPING 10 BBLS 80 VIS SWEEP WITH 5% LCM TO HELP LOSS TRQ ON/OFF = 9-11 K PSI ON /OFF 2200-2300 , DIFF 100-400 PU/SO/RT = 175/125/150 K, 25K DRAG SLIDE = 104' IN 1.91 HRS = 54' PH ROT = 2078' IN 14.09 HRS = 147' PH NOV- ON LINE 2- DEWATERING 6' N & 5' W OF TARGET CENTER 5 DRILL FLARE, 5 CONN FLARE HOLE IN GOOD CONDITION
	16:00 - 16:30	0.50	DRLPRC	07	A	P		LUBRICATE RIG, FUNCTION HCR AND ANN, BOP DRILL
	16:30 - 0:00	7.50	DRLPRC	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 7306' TO 8152', 846' @113' PH WOB / 22-23 RPM TOP DRIVE 50- 60, MOTOR-135 SPM 200 = GPM 586 MW 8.5 VIS 28 PUMPING 10 BBLS 80 VIS SWEEP WITH 5% LCM TO HELP LOSS TRQ ON/OFF = 9-11 K PSI ON /OFF 2200-2300 , DIFF 100-400 PU/SO/RT = 175/125/150 K, 25K DRAG SLIDE = 62' IN 1.25 HRS = 50' PH ROT = 784' IN 6.25 HRS = 125' PH NOV- ON LINE 2- DEWATERING .36' N & 4.44' W OF TARGET CENTER 5 DRILL FLARE, 5 CONN FLARE HOLE IN GOOD CONDITION

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 3/26/2012

End Date: 5/19/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/18/2012	0:00 - 3:30	3.50	DRLPRC	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 8152' TO 8550', 398' @114' PH WOB / 22-23 RPM TOP DRIVE 50- 60, MOTOR-135 SPM 200 = GPM 586 MW 8.5 VIS 28 PUMPING 10 BBLS 80 VIS SWEEP WITH 5% LCM TO HELP LOSS TRQ ON/OFF = 9-11 K PSI ON /OFF 2200-2300 , DIFF 100-400 PU/SO/RT = 175/125/150 K, 25K DRAG SLIDE = ROT = 100% NOV- ON LINE 2- DEWATERING .36' S & 4' E OF TARGET CENTER 5 DRILL FLARE, 5 CONN FLARE HOLE IN GOOD CONDITION
	3:30 - 8:00	4.50	DRLPRC	05	G	P		DISPLACE WITH 11.2 PPG MUD WITH 55 LCM TO INHIBIT LOSSES
	8:00 - 16:00	8.00	DRLPRC	06	E	P		WIPER TRIP TO SHOE AND BACK, WASH & REAM OFF BOTTOM
	16:00 - 20:00	4.00	DRLPRC	05	C	P		CIRCULATE BOTTOMS UP, RIG UP KIMZEY LAYDOWN TRUCK
	20:00 - 0:00	4.00	DRLPRC	06	A	P		LAYING DOWN DRILL PIPE
5/19/2012	0:00 - 2:30	2.50	DRLPRC	06	A	P		LAYING DOWN DRILL PIPE AND BHA
	2:30 - 3:00	0.50	DRLPRC	14	B	P		PULL WEAR BUSHING
	3:00 - 3:30	0.50	DRLPRC	12	A	P		RIG UP KIMZEY CASING CREW, PREJOB SAFETY MEETING
	3:30 - 9:30	6.00	DRLPRC	12	C	P		FINISHED RUNNING CASING, RUN 80 JTS 4.5" I-80 + 1 MARKER, 130 JTS 4.5" I-80 DQX + 1 X/O, 1 PUP & 1 LANDING JT, SHOE @ 8534', FLOAT @ 8490, MESA MARKER @ 6315', X/O @ 5047'
	9:30 - 11:00	1.50	DRLPRC	05	D	P		CIRCULATING DOWN CASING
	11:00 - 14:00	3.00	DRLPRC	12	E	P		HELD SAFETY MEETING, PUMP 25 BBL WATER SPACER, LEAD 400 SACKS 2.26 YLD 12.5 PPG, TAIL 1026 SACKS 1.32 YLD 14.3 PPG WITH .05% EC-1, DROP PLUG & DISPLACE WITH 131 BBLS CLAY TREAT WATER, FULL RETURNS THOUGH OUT JOB WITH NO CEMENT BACK TO SURFACE, BUMP PLUG @ 2900 PSI, 600 PSI OVER FINAL LIFT OF 2300, FLOATS HELD, EST TOP OF TAIL 3700,' EST TOP OF LEAD 700' FROM SURFACE
	14:00 - 14:30	0.50	DRLPRC	14	B	P		SET CAMERON PACKER
	14:30 - 18:00	3.50	DRLPRC	14	A	P		NIPPLE DOWN BOPE, CLEAN PITS, RELEASE RIG TO NBU 1022-12K4CS

## 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	NBU 1022-12A1BS (GREEN)	Wellbore No.	OH
Well Name	NBU 1022-12A1BS	Wellbore Name	NBU 1022-12A1BS
Report No.	1	Report Date	7/13/2012
Project	UTAH-UINTAH	Site	NBU 1022-12A PAD
Rig Name/No.		Event	COMPLETION
Start Date	7/12/2012	End Date	7/20/2012
Spud Date	4/9/2012	Active Datum	RKB @5,190.00usft (above Mean Sea Level)
UWI	NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0		

### 1.3 General

Contractor	CASED HOLE	Job Method	PERFORATE	Supervisor	FRANK WINN
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

### 1.4 Initial Conditions

Fluid Type	PRODUCED WATER	Fluid Density	8.40 (ppg)
Surface Press		Estimate Res Press	
TVD Fluid Top	0.0 (usft)	Fluid Head	5,190.0 (usft)
Hydrostatic Press	2,264.73 (psi)	Press Difference	2,264.73 (psi)
Balance Cond	OVER BALANCED		

### 1.5 Summary

Gross Interval	6,588.0 (usft)-8,373.0 (usft)	Start Date/Time	7/13/2012 12:00AM
No. of Intervals	43	End Date/Time	7/13/2012 12:00AM
Total Shots	208	Net Perforation Interval	54.00 (usft)
Avg Shot Density	3.85 (shot/ft)	Final Surface Pressure	
		Final Press Date	

## 2 Intervals

### 2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/13/2012 12:00AM	MESAVERDE/			6,588.0	6,590.0	4.00		0.360	EXP/	3.125	90.00			23.00 PRODUCTION	
														N	

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/13/2012 12:00AM	MESAVERDE/			6,632.0	6,634.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,682.0	6,683.0	3.00		0.360	EXP/	3.125	120.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,710.0	6,711.0	3.00		0.360	EXP/	3.125	120.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,737.0	6,738.0	3.00		0.360	EXP/	3.125	120.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,762.0	6,763.0	3.00		0.360	EXP/	3.125	120.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,780.0	6,781.0	3.00		0.360	EXP/	3.125	120.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,820.0	6,821.0	3.00		0.360	EXP/	3.125	120.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,913.0	6,915.0	3.00		0.360	EXP/	3.125	120.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			6,955.0	6,956.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,005.0	7,006.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,051.0	7,052.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,103.0	7,104.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,120.0	7,121.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,171.0	7,172.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,282.0	7,283.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,335.0	7,336.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,363.0	7,365.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,394.0	7,396.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,438.0	7,439.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,453.0	7,454.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,485.0	7,486.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
7/13/2012 12:00AM	MESAVERDE/			7,503.0	7,504.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,537.0	7,539.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,635.0	7,636.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,669.0	7,670.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,691.0	7,693.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,719.0	7,721.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,756.0	7,757.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,783.0	7,784.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,824.0	7,825.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,849.0	7,850.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,872.0	7,874.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,934.0	7,935.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			7,957.0	7,958.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,015.0	8,016.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,027.0	8,028.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,058.0	8,059.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,092.0	8,093.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,281.0	8,282.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,287.0	8,288.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,293.0	8,295.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	
7/13/2012 12:00AM	MESAVERDE/			8,371.0	8,373.0	4.00		0.360	EXP/	3.125	90.00		23.00	PRODUCTIO N	

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1

Event: COMPLETION

Start Date: 7/12/2012

End Date: 7/20/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/12/2012	7:00 - 13:00	6.00	COMP	33	C	P		HSM. FILL SURFACE AND CSG. RU B&C QUICK TEST.  TEST 4-1/2" CSG AND FRAC VALVES. BEGIN                      END              LOST 1025# FOR 15 MIN.    1019#              6# 3539# FOR 15 MIN.    3533#              6# 7141# FOR 30 MIN.    7085#              56#  NO COMMUNICATION. GOOD TEST. BLEED OFF. RD B&C.
7/13/2012	7:00 - 12:00	5.00	COMP	37	B	P		HSM. MIRU CASED HOLE. RIH W/ 3-1/8" EXP GUN (23 GR, 40" PENT) AND PERF STG 1 8281'-8373' AS PER PROCEEDURE. SWFEN. MIRU SUPERIOR.

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1

Event: COMPLETION

Start Date: 7/12/2012

End Date: 7/20/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/16/2012	6:30 - 17:00	10.50	COMP	36	B	P		<p>HSM. PRES TEST LINES TO 8000#. GOOD. KILL SET AT 6800# AND 6900#. POP OFF SET AT 7000#.</p> <p>STAGE #1- PERFS 8281'-8373' (24 HOLES)            OPEN WELL- SICP 1447 PSI. BRK 4241 PSI AT 4.8 BPM, ISIP 2461, FG .73.            PMP PAD, 49.9 BPM @ 4286 PSI = 24/24, 100%            PERFS OPEN.            MP 5521, MR 50.0, AP 4441, AR 48.3, FG .75, ISIP 2633, NPI 169.            PMP 30/50 WHITE.</p> <p>-----</p> <p>STAGE #2- PU 4-1/2" HALCO 8K CBP AND 3-3/8" EXP GUNS, 23 GM, .36" HOLES. SET CBP AT 8123'. PULL UP AND PERF 7934'-8093' (24 HOLES) AS PROCEEDURE.</p> <p>OPEN WELL.- SICP 538 PSI. BRK 2977 PSI AT 5.0 BPM, ISIP 2374, FG .73.            PMP PAD, 49.3 BPM @ 4313 PSI = 43/24, 100%            PERFS OPEN.            MP 4748, MR 50.0, AP 4421, AR 49.0, FG .75, ISIP 2506, NPI 132.            PMP 30/50 WHITE.</p> <p>-----</p> <p>STAGE #3- PU 4-1/2" HALCO 8K CBP AND 3-3/8" EXP GUNS, 23 GM, .36 HOLES. SET CBP AT 7904'. PULL UP AND PERF 7756'-7874' AS PER PROCEEDURE. (24 HOLES)</p> <p>OPEN WELL.- SICP 2266 PSI. BRK 2993 PSI AT 4.5 BPM, ISIP 2495, FG .76.            PMP PAD, 50.1 BPM @ 5041 PSI = 23/24, 96%            PERFS OPEN.            MP 5288, MR 51.0, AP 4837, AR 50.0, FG .75, ISIP 2456, NPI -39.            PMP 30/50 WHITE.</p> <p>-----</p> <p>STAGE #4- PU 4-1/2" HALCO 8K CBP AND 3-3/8" EXP GUNS, 23 GM, .36 HOLES. SET CBP AT 7746'. PULL UP AND PERF 7635'-7721' AS PER PROCEEDURE (24 HOLES)</p> <p>OPEN WELL.- SICP 1690 PSI. BRK 2098 PSI AT 4.8 BPM, ISIP 1744, FG .67.            PMP PAD, 48.2 BPM @ 4434 PSI = 20/24, 83%            PERFS OPEN.            MP 4659, MR 50.2, AP 3960, AR 49.3, FG .70, ISIP 2015, NPI 271.            PMP 30/50 WHITE.</p>

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)			Spud Date: 4/9/2012		
Project: UTAH-UINTAH		Site: NBU 1022-12A PAD		Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1	
Event: COMPLETION		Start Date: 7/12/2012		End Date: 7/20/2012	
Active Datum: RKB @5,190.00usft (above Mean Sea Level)			UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								STAGE #5- PU 4-1/2" HALCO 8K CBP AND 3-3/8" EXP GUNS, 23 GM, .36 HOLES. SET CBP AT 7569'. PULL UP AND PERF 7438'-7539' AS PER PROCEEDURES. SWFEN

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1

Event: COMPLETION

Start Date: 7/12/2012

End Date: 7/20/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/17/2012	7:00 - 18:00	11.00	COMP	36	B	P		<p>HSM. KILLS SET AT 6800# AND 6900#. POP OFF SET AT 7000#</p> <p>STAGE #5- PERFS AT 7438'-7539' (24 HOLES) OPEN WELL.- SICP 1467 PSI. BRK 4011 PSI AT 4.7 BPM, ISIP 1896, FG .69. PMP PAD, 48.7 BPM @ 4194 PSI = 24/24, 100% PERFS OPEN. MP 4309, MR 52.5, AP 3940, AR 49.5, FG .71, ISIP 2000, NPI 104. PMP 30/50 WHITE.</p> <p>-----</p> <p>STAGE #6- PU 4-1/2" HALCO 8K CBP AND 3-3/8" EXP GUNS, 23 GM, .36 HOLES. SET CBP AT 7426'. PULL UP AND PERF 7283'-7396' AS PER PROCEDURES. (24 HOLES)</p> <p>OPEN WELL.- SICP 1767 PSI. BRK 2271 PSI AT 4.1 BPM, ISIP 1876, FG .69. PMP PAD, 49.8 BPM @ 3940 PSI = 24/24, 100% PERFS OPEN. MP 3983, MR 52.7, AP 3851, AR 50.5, FG .74, ISIP 2179, NPI 303. PMP 30/50 WHITE.</p> <p>-----</p> <p>STAGE #7- PU 4-1/2" HALCO 8K CBP AND 3-3/8" EXP GUNS, 23 GM, .36 HOLES. SET CBP AT 7202'. PULL UP AND PERF 6955'-7172' AS PER PROCEDURES. (24 HOLES)</p> <p>OPEN WELL.- SICP 345 PSI. BRK 1981 PSI AT 4.6 BPM, ISIP 1414, FG .64. PMP PAD, 50.7 BPM @ 4276 PSI = 20/24, 83% PERFS OPEN. MP 4331, MR 50.9, AP 4117, AR 50.4, FG .77, ISIP 2352, NPI 938. PMP 30/50 WHITE.</p> <p>-----</p> <p>STAGE #8- PU 4-1/2" HALCO 8K CBP AND 3-3/8" EXP GUNS, 23 GM, .36 HOLES. SET CBP AT 6945'. PULL UP AND PERF 6682'-6915' AS PER PROCEDURES. (24 HOLES)</p> <p>OPEN WELL.- SICP 1254 PSI. BRK 1808 PSI AT 3.8 BPM, ISIP 1628, FG .68. PMP PAD, 48.6 BPM @ 3745 PSI = 24/24, 100% PERFS OPEN. MP 4056, MR 51.2, AP 3678, AR 50.0, FG .77, ISIP 2281, NPI 653. PMP 30/50 WHITE.</p> <p>-----</p> <p>STAGE #9- PU 4-1/2" HALCO 8K CBP AND 3-3/8"</p>

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1

Event: COMPLETION

Start Date: 7/12/2012

End Date: 7/20/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								EXP GUNS, 23 GM, .36 HOLES. SET CBP AT 6666'. PULL UP AND PERF 6588'-6636' AS PER PROCEEDURES. (24 HOLES)
								OPEN WELL.- SICP 192 PSI. BRK 2162 PSI AT 4.5 BPM, ISIP 1392, FG .65. PMP PAD, 50.1 BPM @ 4000 PSI = 23/24, 96% PERFS OPEN. MP 4382, MR 50.7, AP 3738, AR 50.3, FG .81, ISIP 2469, NPI 1077. PMP 30/50 WHITE. (SHORT 4438# SAND)
								SET KILL PLUG AT 6538'. RD CASED HOLE AND SUPERIOR.
								CUMM 220,970# 30/50 WHITE PROP CUMM 9633BBLS CL FL 203 GAL SCALE INHIB 132 GAL BIOCIDES ROAD RIG F/ BONANZA 1023-8H2DS TO N BU 1022-12A PAD HSM, REVIEW PU TBG F/ TRAILER.
7/19/2012	12:00 - 13:00	1.00	COMP	30	G	P		MIRU, ND WH, NU BOP'S, RU FLOOR & TBG EQUIPMENT, P.T. BOP'S TO 3000 PSI. FOR 10 MINS, HELD,
	13:00 - 13:30	0.50	COMP	48		P		PU 3-7/8 SEAL BEARING BIT, 1.875 POBS, TALLY & RIH 125 JTS. 2-3/8 L-80 TBG F/ TRAILER, EOT @ 3980', SWI, SDFN
	13:30 - 14:00	0.50	COMP	30	F	P		
	14:00 - 17:00	3.00	COMP	31	I	P		
7/20/2012	-							HSM, REVIEW D/O 9 CBP'S
	7:00 - 7:30	0.50	COMP	48		P		FINISH RIH TBG F/ TRAILER, TAG SAND @ 6539'
	7:30 - 9:30	2.00	COMP	31	I	P		NU PWR SWWL.
	9:30 - 10:00	0.50	COMP	47	A	P		PLUG # 1 C/O 2' SAND, TAG PLUG @ 6541', D/O PLUG IN 8 MINS, HAD 300 PSI. INCREASE
	10:00 - 14:00	4.00	COMP	44	C	P		PLUG # 2 C/O 30' SAND, TAG PLUG @ 6666', D/O PLUG IN 12 MINS, HAD 200 PSI. INCREASE PLUG # 3 C/O 30' SAND, TAG PLUG @ 6945', D/O PLUG IN 7 MINS, HAD 300 PSI. INCREASE PLUG # 4 C/O 30' SAND, TAG PLUG @ 7202', D/O PLUG IN 10 MINS, HAD 300 PSI. INCREASE PLUG # 5 C/O 30' SAND, TAG PLUG @ 7426', D/O PLUG IN 10 MINS, HAD 300 PSI. INCREASE PLUG # 6 C/O 30' SAND, TAG PLUG @ 7569', D/O PLUG IN 10 MINS, HAD 300 PSI. INCREASE PLUG # 7 C/O 30' SAND, TAG PLUG @ 7740', D/O PLUG IN 9 MINS, HAD 100 PSI. INCREASE PLUG # 8 C/O 30' SAND, TAG PLUG @ 7904', D/O PLUG IN 10 MINS, HAD 300 PSI. INCREASE PLUG # 9 C/O 30' SAND, TAG PLUG @ 8123', D/O PLUG IN 10 MINS, HAD 200 PSI. INCREASE, RIH 267 JTS. 2-3/8 L-80 TBG, TAG SAND 8458' C/O TO 8489' PBTB, BTM PERF @ 8373' (116' RAT HOLE) CIRC WELL CLEAN, ND PWR SWWL.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)

Spud Date: 4/9/2012

Project: UTAH-UINTAH

Site: NBU 1022-12A PAD

Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1

Event: COMPLETION

Start Date: 7/12/2012

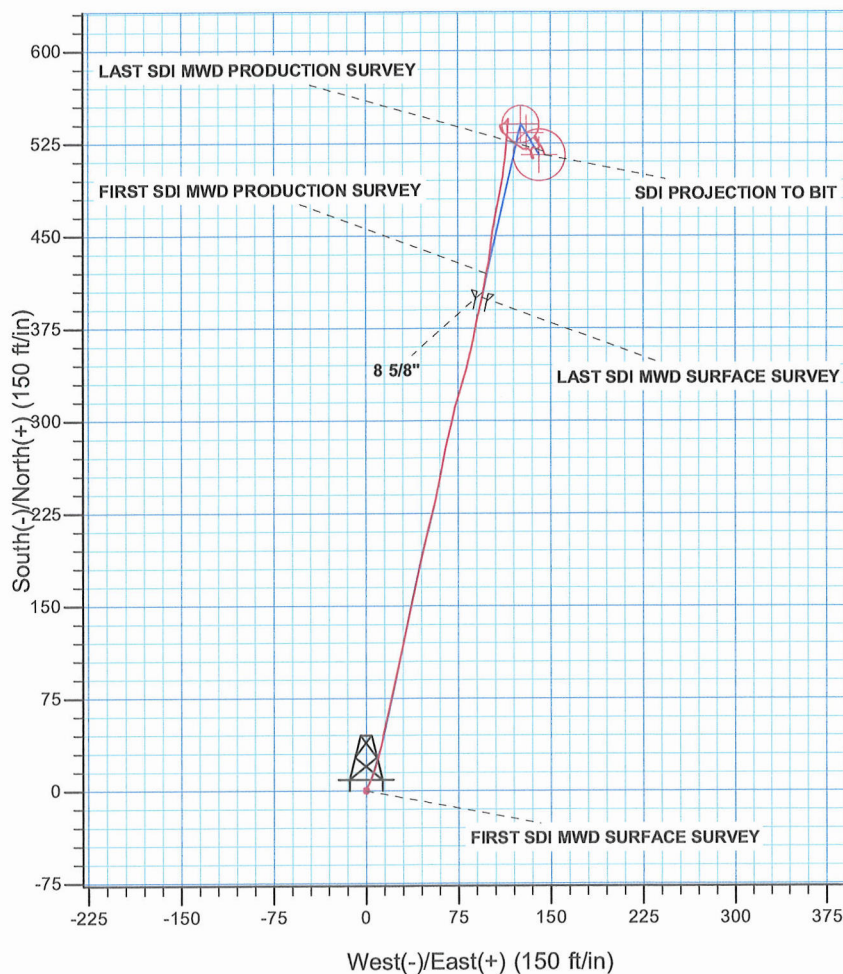
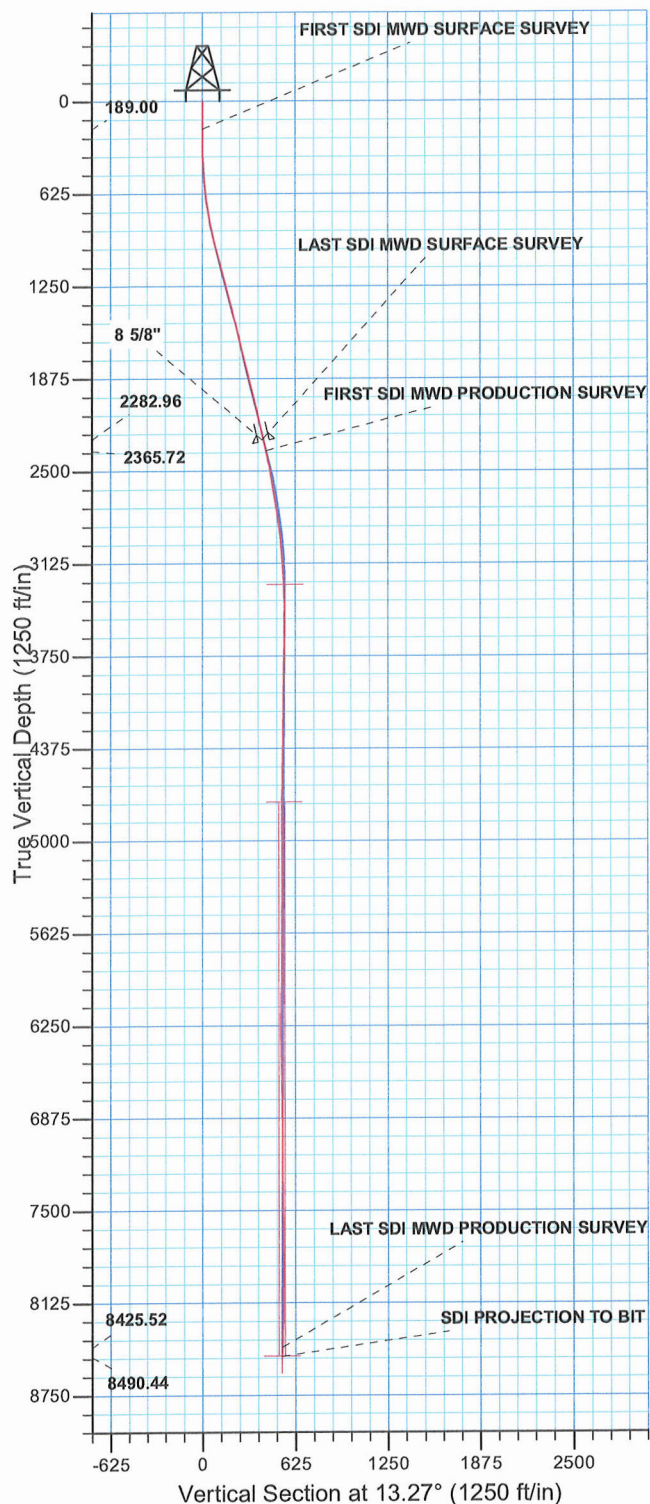
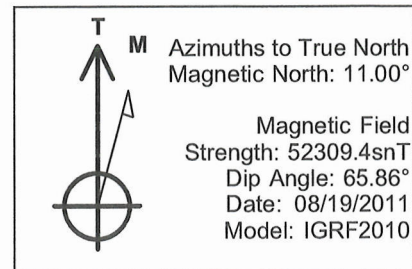
End Date: 7/20/2012

Active Datum: RKB @5,190.00usft (above Mean Sea Level)

UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:00 - 17:00	3.00	COMP	31	I	P		<p>POOH &amp; LD 18 JTS. 2-3/8 L-80 TBG ON TRAILER, LAND TBG HANGER, LAND TBG W/ 249 JTS. 2-3/8 L-80 TBG, EOT @ 7916.84', RD FLOOR &amp; TBG EQUIPMENT, ND BOP'S, DROP BALL, NU WH, P.T. LINES TO HAL 9000 TO 3000 PSI. HELD, PUMP 12 BBLS DWN TBG, PUMP BIT-OFF @ 1700 PSI. TURN WELL OVER TO FLOWBACK CREW. WILL RD &amp; MOVE TO NEXT WELL ON PAD.</p> <p>DELIVERED 283 JTS. 2-3/8 L-80 TBG USED 249 JTS. 2-3/8 L-80 TBG RETURNED 34 JTS. 2-3/8 L-80 TBG</p> <p>TBG DETAIL:</p> <p>KB-----19' WEATHERFORD HANGER-----.83 249 JTS. 2-3/8 L-80 TBG-----7894.81' 1.875 XN POBS-----2.20' EOT@-----7916.84' TOP PERF @ 6632' BTM PERF @ 8373 PBTD @ 8489' WELL TURNED TO SALES @ 16:00 HR ON 7/20/2012, 1400 MCFD, 1920 BWPD, FCP 2150#, FTP 1995#, 20/64".</p>
	17:00 - 17:00	0.00	COMP	50				

WELL DETAILS: NBU 1022-12A1BS					
GL 5171 & 19 @ 5190.00ft (PIONEER 54)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14518897.44	2094220.90	39.969056	-109.380377



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N	
Geodetic System: Universal Transverse Mercator (US Survey Feet)	Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866	Zone: Zone 12N (114 W to 108 W)
Location: SECTION 12 T10S R22E	System Datum: Mean Sea Level
Design: OH (NBU 1022-12A1BS/OH)	
Created By: Gabe Kendall	Date: 14:08, May 23 2012



**Scientific Drilling**

## **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 1022-12A PAD**

**NBU 1022-12A1BS**

**OH**

**Design: OH**

## **Standard Survey Report**

**23 May, 2012**

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** NBU 1022-12A PAD  
**Well:** NBU 1022-12A1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 1022-12A1BS  
**TVD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**MD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Project** UTAH - UTM (feet), NAD27, Zone 12N  
**Map System:** Universal Transverse Mercator (US Survey Feet) **System Datum:** Mean Sea Level  
**Geo Datum:** NAD 1927 (NADCON CONUS)  
**Map Zone:** Zone 12N (114 W to 108 W)

**Site** NBU 1022-12A PAD, SECTION 12 T10S R22E  
**Site Position:** **Northing:** 14,518,904.17 usft **Latitude:** 39.969073  
**From:** Lat/Long **Easting:** 2,094,250.21 usft **Longitude:** -109.380272  
**Position Uncertainty:** 0.00 ft **Slot Radius:** 13.200 in **Grid Convergence:** 1.04 °

**Well** NBU 1022-12A1BS, 598 FNL 621 FEL  
**Well Position** **+N/-S** 0.00 ft **Northing:** 14,518,897.44 usft **Latitude:** 39.969056  
**+E/-W** 0.00 ft **Easting:** 2,094,220.90 usft **Longitude:** -109.380377  
**Position Uncertainty** 0.00 ft **Wellhead Elevation:** ft **Ground Level:** 5,171.00 ft

**Wellbore** OH  
**Magnetics** **Model Name** **Sample Date** **Declination (°)** **Dip Angle (°)** **Field Strength (nT)**  
 IGRF2010 08/19/11 11.00 65.86 52,309

**Design** OH  
**Audit Notes:**  
**Version:** 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00  
**Vertical Section:** **Depth From (TVD) (ft)** **+N/-S (ft)** **+E/-W (ft)** **Direction (°)**  
 0.00 0.00 0.00 13.27

**Survey Program** **Date** 05/23/12  

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
15.00	2,330.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1
2,415.00	8,550.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
189.00	0.09	276.17	189.00	0.01	-0.14	-0.02	0.05	0.05	0.00
<b>FIRST SDI MWD SURFACE SURVEY</b>									
276.00	1.06	31.31	276.00	0.71	0.21	0.74	1.27	1.11	132.34
359.00	1.85	26.83	358.97	2.56	1.22	2.77	0.96	0.95	-5.40
450.00	3.34	22.17	449.87	6.33	2.88	6.82	1.65	1.64	-5.12
540.00	4.22	20.76	539.68	11.85	5.04	12.69	0.98	0.98	-1.57
630.00	6.16	16.10	629.30	19.59	7.56	20.80	2.20	2.16	-5.18
720.00	8.53	14.79	718.56	30.68	10.60	32.30	2.64	2.63	-1.46

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** NBU 1022-12A PAD  
**Well:** NBU 1022-12A1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 1022-12A1BS  
**TVD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**MD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
810.00	10.64	13.12	807.30	45.23	14.19	47.28	2.36	2.34	-1.86
900.00	12.93	12.59	895.39	63.15	18.27	65.66	2.55	2.54	-0.59
990.00	14.23	11.83	982.88	83.81	22.74	86.79	1.46	1.44	-0.84
1,080.00	14.55	11.58	1,070.05	105.71	27.27	109.14	0.36	0.36	-0.28
1,170.00	14.88	12.58	1,157.10	128.06	32.06	132.00	0.46	0.37	1.11
1,260.00	14.77	11.11	1,244.10	150.60	36.79	155.02	0.44	-0.12	-1.63
1,350.00	14.09	13.75	1,331.27	172.50	41.60	177.44	1.05	-0.76	2.93
1,440.00	14.33	11.80	1,418.51	194.04	46.48	199.53	0.59	0.27	-2.17
1,530.00	13.19	13.82	1,505.93	214.91	51.21	220.93	1.37	-1.27	2.24
1,620.00	13.89	14.43	1,593.43	235.35	56.36	242.00	0.79	0.78	0.68
1,710.00	14.25	10.83	1,680.73	256.69	61.13	263.87	1.05	0.40	-4.00
1,800.00	14.20	10.41	1,767.97	278.42	65.21	285.96	0.13	-0.06	-0.47
1,890.00	14.25	13.47	1,855.21	300.05	69.78	308.06	0.84	0.06	3.40
1,980.00	13.45	16.81	1,942.59	320.85	75.39	329.58	1.26	-0.89	3.71
2,070.00	13.54	15.49	2,030.11	341.02	81.23	350.56	0.36	0.10	-1.47
2,160.00	13.37	12.50	2,117.64	361.33	86.30	371.49	0.80	-0.19	-3.32
2,250.00	13.45	11.27	2,205.19	381.76	90.59	392.36	0.33	0.09	-1.37
2,330.00	13.63	11.80	2,282.96	400.11	94.34	411.08	0.27	0.23	0.66
<b>LAST SDI MWD SURFACE SURVEY</b>									
2,415.00	12.75	10.81	2,365.72	419.12	98.15	430.46	1.07	-1.04	-1.16
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
2,510.00	9.76	7.03	2,458.88	437.42	101.10	448.94	3.24	-3.15	-3.98
2,605.00	8.94	6.99	2,552.62	452.74	102.98	464.29	0.86	-0.86	-0.04
2,699.00	9.32	10.55	2,645.43	467.47	105.27	479.15	0.72	0.40	3.79
2,794.00	9.67	12.48	2,739.13	482.82	108.40	494.81	0.50	0.37	2.03
2,889.00	8.97	8.88	2,832.88	497.93	111.27	510.17	0.96	-0.74	-3.79
2,984.00	6.86	6.15	2,926.97	510.89	113.02	523.19	2.26	-2.22	-2.87
3,079.00	5.01	4.04	3,021.45	520.67	113.92	532.92	1.96	-1.95	-2.22
3,173.00	4.04	6.94	3,115.16	528.05	114.61	540.26	1.06	-1.03	3.09
3,268.00	3.25	5.89	3,209.97	534.05	115.29	546.26	0.83	-0.83	-1.11
3,363.00	2.90	1.06	3,304.83	539.13	115.61	551.27	0.46	-0.37	-5.08
3,457.00	1.41	11.16	3,398.76	542.64	115.88	554.75	1.63	-1.59	10.74
3,552.00	0.44	21.80	3,493.75	544.13	116.24	556.28	1.03	-1.02	11.20
3,647.00	0.62	233.53	3,588.74	544.16	115.96	556.25	1.07	0.19	-156.07
3,742.00	0.79	193.18	3,683.74	543.22	115.40	555.20	0.54	0.18	-42.47
3,836.00	2.64	237.31	3,777.69	541.42	113.43	553.00	2.28	1.97	46.95
3,931.00	1.32	246.80	3,872.64	539.81	110.58	550.78	1.43	-1.39	9.99
4,026.00	0.53	167.70	3,967.63	538.95	109.67	549.73	1.40	-0.83	-83.26
4,121.00	0.79	195.56	4,062.62	537.89	109.59	548.68	0.43	0.27	29.33
4,215.00	1.23	162.86	4,156.61	536.30	109.71	547.16	0.75	0.47	-34.79
4,310.00	1.41	134.82	4,251.58	534.50	110.84	545.67	0.70	0.19	-29.52
4,405.00	2.81	133.86	4,346.51	532.06	113.35	543.87	1.47	1.47	-1.01
4,499.00	2.02	134.21	4,440.43	529.31	116.20	541.85	0.84	-0.84	0.37

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** NBU 1022-12A PAD  
**Well:** NBU 1022-12A1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 1022-12A1BS  
**TVD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**MD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,594.00	3.17	130.17	4,535.33	526.45	119.40	539.80	1.22	1.21	-4.25
4,689.00	3.08	127.35	4,630.19	523.21	123.44	537.57	0.19	-0.09	-2.97
4,784.00	2.02	117.16	4,725.09	520.89	126.96	536.13	1.21	-1.12	-10.73
4,879.00	0.70	90.62	4,820.07	520.12	129.03	535.85	1.50	-1.39	-27.94
4,974.00	0.44	44.03	4,915.06	520.38	129.86	536.29	0.54	-0.27	-49.04
5,069.00	0.62	80.24	5,010.06	520.73	130.62	536.81	0.39	0.19	38.12
5,164.00	0.70	180.97	5,105.05	520.23	131.12	536.44	1.07	0.08	106.03
5,260.00	0.53	40.17	5,201.05	519.99	131.40	536.26	1.21	-0.18	-146.67
5,355.00	0.26	13.27	5,296.05	520.53	131.73	536.87	0.34	-0.28	-28.32
5,449.00	0.35	151.08	5,390.05	520.49	131.92	536.87	0.61	0.10	146.61
5,544.00	0.44	140.27	5,485.05	519.96	132.29	536.44	0.12	0.09	-11.38
5,639.00	0.79	119.71	5,580.04	519.35	133.09	536.03	0.43	0.37	-21.64
5,734.00	0.88	145.20	5,675.03	518.43	134.08	535.36	0.40	0.09	26.83
5,828.00	0.97	151.52	5,769.02	517.13	134.87	534.28	0.14	0.10	6.72
5,923.00	0.35	191.87	5,864.01	516.14	135.19	533.39	0.78	-0.65	42.47
6,017.00	0.35	161.81	5,958.01	515.59	135.22	532.86	0.19	0.00	-31.98
6,112.00	0.70	151.08	6,053.01	514.81	135.59	532.18	0.38	0.37	-11.29
6,207.00	1.49	161.37	6,147.99	513.13	136.27	530.71	0.85	0.83	10.83
6,302.00	0.18	303.84	6,242.98	512.04	136.54	529.71	1.72	-1.38	149.97
6,397.00	1.14	313.59	6,337.97	512.78	135.73	530.24	1.01	1.01	10.26
6,492.00	0.79	345.76	6,432.96	514.06	134.89	531.30	0.66	-0.37	33.86
6,589.00	0.53	327.22	6,529.95	515.09	134.48	532.20	0.34	-0.27	-19.11
6,681.00	1.41	357.45	6,621.94	516.58	134.20	533.59	1.07	0.96	32.86
6,776.00	1.32	16.96	6,716.91	518.79	134.46	535.80	0.50	-0.09	20.54
6,871.00	0.97	25.14	6,811.89	520.56	135.13	537.68	0.41	-0.37	8.61
6,966.00	0.44	94.31	6,906.89	521.26	135.83	538.52	0.96	-0.56	72.81
7,061.00	0.97	102.57	7,001.88	521.06	136.98	538.59	0.57	0.56	8.69
7,156.00	1.06	129.11	7,096.87	520.33	138.45	538.22	0.50	0.09	27.94
7,251.00	0.62	61.44	7,191.86	520.02	139.58	538.18	1.06	-0.46	-71.23
7,346.00	0.88	57.22	7,286.85	520.67	140.64	539.05	0.28	0.27	-4.44
7,441.00	1.14	5.10	7,381.84	522.00	141.34	540.51	0.97	0.27	-54.86
7,536.00	2.11	330.38	7,476.80	524.46	140.56	542.72	1.41	1.02	-36.55
7,631.00	1.32	316.23	7,571.76	526.77	138.94	544.60	0.94	-0.83	-14.89
7,726.00	1.14	330.21	7,666.73	528.38	137.71	545.89	0.37	-0.19	14.72
7,822.00	0.52	14.53	7,762.72	529.63	137.35	547.02	0.88	-0.65	46.17
7,917.00	0.36	51.61	7,857.72	530.24	137.69	547.68	0.34	-0.17	39.03
8,011.00	1.14	151.11	7,951.72	529.60	138.37	547.22	1.33	0.83	105.85
8,106.00	1.06	149.06	8,046.70	528.02	139.28	545.89	0.09	-0.08	-2.16
8,201.00	1.23	152.01	8,141.68	526.37	140.21	544.50	0.19	0.18	3.11
8,296.00	1.67	144.14	8,236.65	524.34	141.50	542.82	0.51	0.46	-8.28
8,391.00	2.02	151.61	8,331.60	521.75	143.11	540.67	0.45	0.37	7.86
8,485.00	2.79	163.10	8,425.52	518.10	144.56	537.45	0.96	0.82	12.22
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
8,550.00	2.79	163.10	8,490.44	515.08	145.48	534.72	0.00	0.00	0.00

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** NBU 1022-12A PAD  
**Well:** NBU 1022-12A1BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 1022-12A1BS  
**TVD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**MD Reference:** GL 5171 & 19 @ 5190.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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SDI PROJECTION TO BIT

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,346.00	2,298.52	8 5/8"	8.625	11.000

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
189.00	189.00	0.01	-0.14	FIRST SDI MWD SURFACE SURVEY
2,330.00	2,282.96	400.11	94.34	LAST SDI MWD SURFACE SURVEY
2,415.00	2,365.72	419.12	98.15	FIRST SDI MWD PRODUCTION SURVEY
8,485.00	8,425.52	518.10	144.56	LAST SDI MWD PRODUCTION SURVEY
8,550.00	8,490.44	515.08	145.48	SDI PROJECTION TO BIT

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UT ST UO 01197-
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 1022-12A1BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0598 FNL 0621 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 12 Township: 10.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047519510000
<b>PHONE NUMBER:</b> 720 929-6454		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 8/9/2016	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input checked="" type="checkbox"/> OTHER	
	OTHER: <input type="text" value="WORKOVER"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. A WELLBORE CLEANOUT HAS BEEN COMPLETED ON THE NBU 1022-12A1BS WELL. PLEASE SEE THE ATTACHED OPERATIONS SUMMARY REPORT FOR DETAILS.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> September 02, 2016		
<b>NAME (PLEASE PRINT)</b> Candice Barber	<b>PHONE NUMBER</b> 435 781-9749	<b>TITLE</b> HSE Representative
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/22/2016	

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 1022-12A1BS (GREEN)				Spud date: 4/9/2012					
Project: UTAH-UINTAH				Site: NBU 1022-12A PAD				Rig name no.: ROCKY MOUNTAIN WELL SERVICE 3/3	
Event: WELL WORK EXPENSE				Start date: 8/9/2016				End date: 8/11/2016	
Active datum: RKB @5,190.00usft (above Mean Sea Level)				UWI: NE/NE/0/10/S/22/E/12/0/0/26/PM/N/598/E/0/621/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation	
8/9/2016	6:45 - 7:00	0.25	MAINT	48	B	P			
	7:00 - 9:00	2.00	MAINT	30	A	P		SPOT RIG AND EQUIPMENT. UNLAND TBG, TBG STUCK.	
	9:00 - 10:00	1.00	MAINT	30	F	P		NUBOP, WORK TBG FREE.	
	10:00 - 17:00	7.00	MAINT	31	S	P		SCAN OUT 249 JTS. ALL RED BAND. LOTS OF PIN CORROSION. BOTTOM JOINTS HAD HEAVY SCALE AND MULTIPLE HOLES. SWIFN	
8/10/2016	6:45 - 7:00	0.25	MAINT	48	B	P		HSM/JSA	
	7:00 - 13:00	6.00	MAINT	31	I	P		250 SICP, KILL WELL W/ 15 BBL. RIH W/ MILL & POBS FOR C/O. TAG FILL W/ 246 JTS (~7875').	
	13:00 - 16:00	3.00	MAINT	31	H	P		RU DRL EQUIP & CIRCULATE AIR FOAM UNTIL RETURNS. WIND BLOWING RETURN GAS FROM FB TANK DIRECTLY AT FOAM UNIT. SHUT DOWN FOR SAFETY CONCERN. CHI WILL MOVE FB TANK TONIGHT. SWIFN.	
8/11/2016	6:45 - 7:00	0.25	MAINT	48	B	P		HSM/JSA	
	7:00 - 15:00	8.00	MAINT	44	D	P		C/O FROM 7875' TO 8469'. TAG OLD POBS. CIRC FOAM FOR 30 MIN.	
	15:00 - 16:00	1.00	MAINT	31	I	P		POOH W/ 17 JTS. LAND TBG @ 7908' W/ 247 JTS P-110. PUMP OFF POBS. BROACH TO EOT.	
	16:00 - 17:00	1.00	MAINT	30	H	P		NDBOP, NUWH	
8/17/2016	7:00 - 15:00	8.00	PROD	42	B	P		Arrived to location, rigged up and bleed pressure down on tubing. Started swabbing made 9 runs fluid level was at, 5600 ft, recovered 44 bbls. Swabbed well back on, well unloaded for a while, casing started communicating well, so we dropped scale knocker in and trip it twice. Set well back on sales and headed back to the shop	